UNITED STATES DISTRICT COURT
EASTERN DISTRICT OF WISCONSIN

ALVIN BALDUS, CINDY BARBERA, CARLENE BECHEN, RONALD BIENDSEIL, RON BOONE, VERA BOONE, ELVIRA BUMPUS, EVANJELINA CLEEREMAN, SHEILA COCHRAN, LESLIE W. DAVIS III, BRETT ECKSTEIN, MAXINE HOUGH, CLARENCE JOHNSON, RICHARD KRESBACH, RICHARD LANGE, GLADYS MANZANET, ROCHELLE MOORE, AMY RISSEEUW, JUDY ROBSON, GLORIA ROGERS, JEANNE SANCHEZ-BELL, CECELIA SCHLIEPP, and TRAVIS THYSSEN,

Plaintiffs,

TAMMY BALDWIN, GWENDOLYNNE MOORE, and RONALD KIND,

Intervenor-Plaintiffs,

v. File No. 11-CV-562

Members of the Wisconsin Government Accountability Board, each only in his official capacity: MICHAEL BRENNAN, DAVID DEININGER, GERALD NICHOL, THOMAS CANE, THOMAS BARLAND, and TIMOTHY VOCKE,

[Caption Continued]

VIDEOTAPE DEPOSITION

PETER A. MORRISON, Ph.D.

Milwaukee, Wisconsin
January 18, 2012

Susan C. Milleville, Court Reporter

and KEVIN KENNEDY, Director and General Counsel for the Wisconsin Government Accountability Board,

Defendants,

F. JAMES SENSENBRENNER, JR., THOMAS E. PETRI, PAUL D. RYAN, JR., REID J. RIBBLE, and SEAN P. DUFFY,

Intervenor-Defendants.

VOCES DE LA FRONTERA, INC., RAMIRO VARA, OLGA WARA, JOSE PEREZ, and ERICA RAMIREZ,

Plaintiffs,

v. Case No. 11-CV-1011 JPS-DPW-RMD

Members of the Wisconsin Government Accountability Board, each only in his official capacity: MICHAEL BRENNAN, DAVID DEININGER, GERALD NICHOL, THOMAS CANE, THOMAS BARLAND, and TIMOTHY VOCKE, and KEVIN KENNEDY, Director and General Counsel for the Wisconsin Government Accountability Board,

Defendants.

I N D E X

E X H I B I T S

(Exhibit Nos. 48 through 49-A and 51 through 55 were attached to the original transcript and copies were provided to counsel. Exhibit No. 50 was attached to the original transcript.)

(The original deposition transcript was filed with Attorney Douglas M. Poland)

VIDEOTAPE DEPOSITION of PETER A. MORRISON, Ph.D. a witness of lawful age, taken on behalf of the Plaintiffs, wherein Alvin Baldus, et al., are Plaintiffs, and Members of the Wisconsin Government Accountability Board, et al., are Defendants, pending in the United States District Court for the Eastern District of Wisconsin, pursuant to subpoena, before Susan C. Milleville, a Court Reporter and Notary Public in and for the State of Wisconsin, at the offices of Reinhart Boerner Van Deuren, S.C., Attorneys at Law, 1000 North Water Street, in the City of Milwaukee, County of Milwaukee, and State of Wisconsin, on the 18th day of January 2012, commencing at 9:21 in the forenoon.

A P P E A R A N C E S

DOUGLAS M. POLAND, Attorney, for GODFREY & KAHN, S.C., Attorneys at Law, One East Main Street, Suite 500, Madison, Wisconsin 53703, appearing on behalf of Plaintiffs Alvin Baldus, et al.

PETER G. EARLE, Attorney, for LAW OFFICE OF PETER EARLE, LLC, Attorneys at Law, 839 North Jefferson Street, Suite 300, Milwaukee, Wisconsin 53202, appearing by telephone on behalf of Plaintiffs Voces De La Frontera, Inc., et al.

A P P E A R A N C E S (Continued)

MARIA S. LAZAR, Assistant Attorney General, for STATE OF WISCONSIN DEPARTMENT OF JUSTICE, 17 West Main Street, Madison, Wisconsin 53703, appearing on behalf of the Defendants.

DANIEL KELLY, Attorney, for REINHART BOERNER VAN DEUREN S.C., Attorneys at Law, 1000 North Water Street, Suite 2100, Milwaukee, Wisconsin 53202, appearing on behalf of the Defendants.

Also present: Todd S. Campbell, CLVS
Campbell Legal Video Company
417 Heather Lane, Suite B
Fredonia, WI 53021
(262) 447-2199

(Exhibit No. 48 marked for identification)

PETER A. MORRISON, Ph.D., called as a witness, being first duly sworn, testified on oath as follows:

EXAMINATION

By Mr. Poland:

Q Good morning, Dr. Morrison.
A Good morning.
Q Dr. Morrison, you're here today pursuant to a subpoena, correct?

A Correct.
Q The court reporter has marked as Deposition Exhibit No. 48 a copy of the subpoena. I'm handing it to you now. I've given copies I think to all counsel.

MR. POLAND: Peter, do you need one?

MR. EARLE: No.

MS. LAZAR: And, Doug, we have documents --

MR. EARLE: May I actually see one?

MR. POLAND: Yes.

MS. LAZAR: We have documents responsive to that.

MR. POLAND: All right. Why don't I take a look at those now.

MS. LAZAR: In addition, we have thumb drives.

MR. EARLE: Thank you.

MS. LAZAR: Thank you.

Q Why don't we go ahead and mark these things as exhibits. We will mark this stack of documents as 49.

(Exhibit No. 49 marked for identification)

MR. EARLE: Is the thumb drive a duplicate of the handout or are they separate documents?

MS. LAZAR: No. It is not a duplicate.

MR. POLAND: I've got the copy for the witness. Maria, is there another set?

MS. LAZAR: Yes. There are several sets.

MR. POLAND: Let's mark the thumb drive as Exhibit 50.

(Exhibit No. 50 marked for identification)

Q Dr. Morrison, I would like to go back to Exhibit 48.
A Yes.
Q Can you identify this document for me.
A This is a subpoena for me to testify at this deposition.
Q And you received a copy of the subpoena?
A Yes, I did.
Q If you turn to the second to the last page, it identifies an Exhibit A with seven enumerated paragraphs. Do you see those?
A Yes.

Q And you understand that those were requests for you to search for and produce materials that are identified in those seven paragraphs, correct?
A Yes.
Q Are those documents that you have produced today in response to those paragraphs in the subpoena?
A Yes, they are.
Q So let me ask you -- I'm not going to go through each of the paragraphs individually because that would take us quite a bit of time. Let me just ask. Did you in fact look for and bring with you today copies of materials that are identified in these seven paragraphs to the extent that they weren't previously provided to counsel?
A Yes, I did.
Q Is there anything that you did not bring with you or did not give to Ms. Lazar or to Mr. Kelly that would have been responsive to any of these seven paragraphs?
A The only thing that I have not given you are copies of published articles which I did not have in my possession but which are cited in my reports. I knew of them, I knew the title of them, but I did not access copies of them having read them years ago or months ago.

Q And that's fair enough. Those are things in the public domain and they're publicly available?
A That's correct.
Q Let's talk now about -- I'm going to hand you a copy of the document that's been marked as Morrison Exhibit No. 49 --
A All right.
Q -- and ask you to identify what the stack of documents that's exhibit -- strike that question. I would like to ask you what are the materials that are collected in Exhibit No. 49.
A These are materials that exist that go beyond the materials that were in electronic form on my hard drive which are contained on the thumb drive. So basically everything on my hard drive is contained on the thumb drive, and then I had a file of materials which all have been photocopied here. There will be some substantial overlap between the hard copies that you have in Exhibit 49 which also in some instances exist on my hard drive. So there is some overlap between the two. For the most part the hard copies here are things that were not on the hard drive.
Q All right. What I would like to do is -- just so I understand what's in the stack, we're going to

go through it here. We haven't marked these separately as exhibits. Let's see if we can go through, and there aren't too many of them, and do it without numbering them separately. What is the first page of Exhibit 49?
A The first page is a photocopy of notes that I have on the outside of a manila file in which I had filed all of the hard copy materials here. Where it says Wisconsin Districting on the upper right-hand corner, that is the manila file that contained what's below this.
Q All right.
A The next document is a letter which I think is self-explanatory.
Q I'm going to identify this for the record so that it's clear. That's a letter dated December 22, 2011.
A Correct.
Q That's from me, Doug Poland, and that's to Ms. Lazar and Mr. Hodan?
A Correct. The next several items are spreadsheets that are hard copies of materials that I had printed out on which I have some notes. Those are the next two items. The first one is handwritten 2000 CVAP. The next one has the notation Fix

Line. The next document is entitled Record Layout, and that refers to a special tabulation of 2000 citizen voting age population data. The next document, in the upper left-hand corner it says QT-PL. That is a printout of a Census Bureau published table of data.
Q I'm going to stop you right there for just a second. I just want to understand what these are here. I'm going to go back to the document, the first one that was in those single sheets, that says 2000 CVAP on the top of it.
A Yes.
Q I noticed on the bottom it says Wisconsin stp76-55.xls. I assume this is a printout of a spreadsheet?

MS. LAZAR: You're on the wrong page, Doctor.

Q It's the page that says 2000 CVAP in handwriting on the front.
A One more. I'm sorry. Could you repeat the question?
Q Sure. The document says 2000 CVAP, and that is in handwriting at the top.
A That is correct.
Q And at the bottom of the page you see it says

Wisconsin stp76-55.xls?
A Yes.
Q This is a printout of a spreadsheet; is that correct?
A That is correct.
Q What does this spreadsheet pertain to?
A This spreadsheet shows a special tabulation that was made of the 2000 census data. I believe it was for the Department of Justice, but I'm not sure. It was a special tabulation that was made. It refers to -- the portion of it that I've printed out here refers to the State of Wisconsin and to Milwaukee County, and it shows the voting age population distinguishing citizens from non-citizens and also distinguishing race and ethnicity.
Q So this was existing data from the census; is that correct?
A From Census 2000, correct.
Q From the 2000 census. And that is data that you extracted and then put into the spreadsheet?
A That's correct.
Q Is the spreadsheet that's identified at the bottom, this Excel spreadsheet, is that something that's contained on the thumb drive do you know?

A I believe it is, but, actually, I would have to check on that. Let me say if it is not, I can certainly furnish it to you during the break in the deposition. I don't know if the entire spreadsheet is contained on the thumb drive or just the portion that referred to the State of Wisconsin. In other words, it's a huge file.
Q Okay.
A Where it says Wisconsin stp76-55, the number 55 refers to the State of Wisconsin and also somehow it distinguishes Milwaukee County. But I can check and see and give you the entire thing during the break if it's not on the thumb drive.
Q And what we will probably need to do at various points during the deposition here, and it will probably be a little bit later -- there may be questions that I have on your report where you drew certain numbers from and it may be that we need to refer back to these sheets or maybe not.
A Sure.
Q That will depend in part on the questioning. I just wanted to get an idea of what this is right now. I'm going to have you set that to the side for just a minute. The next page says at the bottom DemoAcctgModel-JuvenilleAging.

A Yes.
Q Can you explain for me generally what this shows.
A Yes. What this shows -- these are the data assembled in order to quantify the maturation of persons under age 18 into the voting ages for Assembly Districts 8 and 9. Does that answer your question?
Q I think so. I think so.
A All right.
Q I'm just writing some things down here as I go. Is this data, like with the previous spreadsheet, that you extracted from a different source?
A These data derive from the sources shown on this page at the lower left. They're data from particular tables in the 2000 census and also the American Community Survey plus the Excel file of what I have for assembly district population composition that I received from Joseph Handrick of the Reinhart law firm.
Q And that Excel file that you had received from Mr. Handrick, is that an Excel file that you have either produced today or previously produced?
A Again, I believe it is on the thumb drive, but I would like to check during the break to make sure because once I used it I simply filed it away

somewhere. But it should have ended up on the thumb drive.
Q All right.
A I would like to verify that.
Q Sure. And we can certainly check that. Then the next document that says at the top Record Layout for Special Tabulations 76 Kim Brace, Election Data Services, what is that document?
A This shows the record layout for a special tabulation of Census 2000 data that was made I believe by -- it was made for the Department of Justice. And it shows how the data are laid out for each file for each state and each county and each county subdivision. It is a file that I obtained from Kim Brace of Election Data Services probably ten years ago when I was using it in another case and I've kept on my hard drive as just a resource.

MS. LAZAR: One clarification, Doctor. When you say Department of Justice, do you mean Wisconsin Department of Justice or United States?

THE WITNESS: United States Department of Justice.

Q So Kim Brace worked for Election Data Services

with the United States Department of Justice?
A I don't know whether he worked for them, but I know that he had obtained the special tabulation. It costs a sum of money that you had to pay to the Census Bureau to get it. He had gotten it. As the first person to request it, he had to pay for its production. The Census Bureau said once we produced it, then it's available to whoever wants it. He had it on his hard drive and I said can I have a copy of it rather than go through the Census Bureau and he sent it to me. This would have been at least eight years ago.
Q That would have been for redistricting litigation or pertaining to redistricting following the 2000 census; is that correct?
A That's correct.
Q What state was that redistricting litigation in?
A You mean what state did I use it for?
Q Yes.
A It would have been California primarily.
Q There are handwritten notations on this document. One says Milwaukee 55079; is that correct?
A Right.
Q What does that notation mean does?
A What that means is where it says FIPS State Code I

had to pick the file that had Wisconsin state code, which is 55, and Milwaukee County which was -- the FIPS County Code is Milwaukee 55079. So that was the particular file within this entire database that I would have to pull out for these two pieces of geography.

Q And the Wisconsin equals 55 underneath, what does that signify?

A That's the FIPS code for Wisconsin.

Q In using this special tabulation, you then pulled out the data pertaining only to Milwaukee 55079; is that correct?

A 55079 and also Wisconsin 55.

Q Is that data that is contained in that special tabulation something that is produced either in printed form or on the thumb drive?

A Again, I believe it's on the thumb drive, but I would like to double-check that during the break.

Q All right.

A It's either on the thumb drive or in the hard copy, but, again, I would like to verify that.

Q We will move through these documents here so you can identify them for me, and if we need to -- if it's not there, we can certainly look on the thumb drive.

A Sure.

Q In this particular data that is identified in the special tabulation, what aspect of your analysis did you use this for?

A My recollection is I used this to calculate the Hispanic share of the voting age population for the State of Wisconsin and for Milwaukee County. I'm sorry. Did I say voting age? Hispanic share of the citizen voting age.

Q CVAP. If I say CVAP, we will both understand that means citizen voting age population?

A Correct.

Q Let's turn to the next page then. This is a document that says in the upper left-hand corner QT-PL Race, Hispanic or Latino and then it goes on from there. This is I believe you testified before a printout of material from the Census Bureau?

A Correct. This comes off of American Fact Finder which is basically the retail front door when you go into the Census Bureau and say I would like to get a table of data. This happens to be Table QT-PL, and then it's entitled what it is. It's from the 2010 census, and it shows the race and age structure of the population for Milwaukee

County.

Q So this is solely pertaining to Hispanic residents in Milwaukee County?

A No. It distinguishes the total population by race, and then it distinguishes the total population by race and ethnicity or I should say by ethnicity and race.

Q I understand. And so this is taken from the 2010 census data, correct?

A Correct.

Q Now, you have a notation over on the right in handwriting or at least somebody wrote a notation that says -- I can't even read that handwriting. Can you read that for me.

A Yes. It's my notation in which I observed that almost all whites and blacks are non-Hispanic.

MR. EARLE: Where is that? I'm sorry.

MR. POLAND: Over on the right in the handwriting to the right of the table.

MR. EARLE: Can we have him highlight that on the exhibit that's going to be attached.

MS. LAZAR: I will get a highlighter.

A I've highlighted it as you requested.

Q How did you come to make that notation?

A I compared simply the distinctions of the population under the major heading Race and then under the minor heading Not Hispanic or Latino below it. It's a comparison of all persons who responded that they were black or African American compared with the non-Hispanic one-race persons who responded black or African American. And my observation was that the number 253,764 was virtually the same as the 248,794. And I believe I did the same thing for whites.

Q So now I'm going to ask you because I'm looking at this table of numbers and trying to pull them out. If I look under the major heading Race where it says One Race and if I skip down to the line that says Black or African American, I see under total number it says 253,764, correct?

A Correct.

Q And then what number did you compare that to?

A If you just look down to maybe the sixth line from the bottom where it says Black or African American, which is the subset of blacks or African Americans who also said they were not Hispanic and you see the number 248,794.

Q Okay. I see that. And so based on that you reached a conclusion that almost all blacks are non-Hispanic, correct?
A Correct.
Q And that that was for the Milwaukee County data?
A That's correct.
Q Are those data available for any smaller geographic area than Milwaukee County?
A I believe they should be available down to a very small piece of geography. I had no reason to go below that level, but -- I would have to check. I think they might be available down to the census block group level.
Q When you say you didn't need to go any smaller than the county level, why is that?
A Just because I wanted to see if there was any substantial overlap between the category Hispanic and the category Black which would indicate that there was a significant presence of let's say Caribbean African Americans or there's a significant Caribbean African American population in the area.
Q And similarly if we look at the major heading Race where it says One Race and then White, we see a number 574,656; is that correct?

A Correct.
Q And then you would have compared that to the number further down under Non-Hispanic or Latino where it says White the number is 514,958?
A Correct.
Q And, again, comparing those two numbers, that's what led you to conclude that almost all whites are non-Hispanic?
A Correct.
Q And in what part of your analysis did you use this particular table of data for?
A I don't recall exactly where I used this, but it is probably the case that I incorporated the data, either from this table or some other table that had the same numbers because the voting age population broken down this way is available in a number of different tables, in calculating the Hispanic share of the total population and of the voting age population for the County of Milwaukee.
Q All right. I would like to move to the next document then. On my copy there's a map on the first page that shows a number of assembly districts and then there are a number of pages attached to that. These are all paper clipped together at least in my copy. Can you identify

what that set of materials is.
A Yes. These are a series of maps that come from different sources. Some of them were printouts from links that I was furnished by Patrick Hodan where he said here is a link you could go to to see what the geography is of the various districts. That would be the case with the first one. The second item in this paper clipped group is a printout of a map that I was looking at on American Fact Finder. Again, the Census Bureau website. The third map is -- this is a map that I arranged to have prepared by my GIS person showing the census -- it's an overview. The one that's labeled Figure 2. If you look at Figure 2 and then the map that follows, Figure 2 is kind of an overview map of the map that follows. Figure 2 is the one that shows the enclave of heavily Hispanic areas that are encompassed by Assembly District 8 and Assembly District 9. The map that follows shows the census tract numbers of that area.
Q I'm just going to stop you there for a second to make sure that the record is clear. So the first page that you're referring to has handwritten Figure 2 up at the top, correct?
A Correct.

Q And then on the map it reads Milwaukee County 2010 Census Tracts --
A Correct.
Q -- and has AD8 and AD9, correct?
A Right.
Q Now, handwritten in there is Hispanic Enclaves. Do you see that?
A Yes.
Q Whose handwriting that?
A That's mine.
Q Why did you write Hispanic Enclaves there?
A Because I had observed the concentration of Hispanics in that area and was noting in my report that the two districts encompassed much of the most heavily Hispanic areas of the county.
Q The page that follows then appears to be zoomed in on that area; is that correct?
A That's correct.
Q And this is the document that says 2010 Census Tracts AD8 AD9?
A Correct.
Q And it identifies the census tracts by number; is that correct?
A That is correct.
Q Is the dark shaded area that has census tract

numbers in them, is that coextensive with AD 8 and AD 9?
A. Yes. What that shows is all census tracts that are wholly or partly within AD 8 or AD 9.
Q. Now, there's not an overlay of the boundaries of AD 8 and AD 9 on this particular page; is that correct?
A. Correct.
Q. Do some of the census tracts extend outside of the boundaries of AD 8 and AD 9?
A. I believe they do, yes.
Q. Now, what did you use the 2010 census tracts for in your analysis?
A. The census tracts listed here identify -- the census tracts listed on the map identify the census tracts for which I would have to obtain data in order to aggregate data into each of the assembly districts.
Q. I'm sure we're going to come back to those a little bit later, or I suspect that we will, but I want to keep moving through these documents. The next page then -- I'm just going to ask you to identify the next page for me. I see that it has a handwritten D9 and D8 on it for the record, but perhaps you can describe it for me.

A. Yes. I'm not sure where I obtained this map. I think it may have been downloaded from one of the websites that I was told to go to. And I'm not sure what the numbers refer to in here. Let me just check this a moment. I might be able to tell you. In any case, this is a map that I've labeled the area D8 and the area D9. I'm not sure if I ever used this beyond just having looked at it. It may have been an early map that I looked at.
Q. What are the numbers that are in the blocks signifying?
A. That's what I'm trying to recollect here. Give me just a moment. I might be able to tell you. These are going to be census tract labels I see. If you look in the upper right-hand corner, you can see -- let me put it this way. Do you see where it says D8 in handwriting?
Q. Yes, I do.
A. If you look directly below that, you will see the number 157 and the number 1865. Those are the census tract numbers that are identified. On this map I was double-checking to make sure that every census tract had been included in the request to my GIS person to compile the data. You will see that I've got a checkmark for all of the census

tracts in the lighter area called D8, and I've got a checkmark in all of the somewhat darker areas to the left that are called D9. What I was doing was assuring that we had all of the census tracts that comprised each of the districts accounted for in what I believe is a spreadsheet that is on the thumb drive.
Q. Now, do the D9 and D8, those notations, have any particular significance?
A. Well, they distinguish the two districts.
Q. All right. So the D9 pertains to Assembly District 9?
A. That's correct.
Q. And D8 pertains to Assembly District 8?
A. That is correct.
Q. If we go back to the previous page we had looked at, the printout that said 2010 Census Tracts AD8 and AD9, and there was a shaded area and there were some numbers in that -- I think you have got it right there in front of you.
A. Yes.
Q. I noticed that the numbers that are on that document are different. They are numbers that have six digits. The numbers in the page we were just looking at only have three or four digits.

A. Let me just see if I can explain how that works. If you see, for example, in the upper right-hand corner 187400 and then on the other map you see 1874, the distinction there is the 1874 refers to a census tract. The 187400 would distinguish block groups within the census tract. 00 means the entire tract. If it had said 1874 and some other digits, that would refer to a particular subpart of the census tract.
Q. I see. So if I understand then, the page that has the 187400, that's simply a larger area and it does correlate with the 1874; is that correct?
A. There's no difference between the two. It's simply a labeling difference.
Q. Right. I understand. So back to the page where you had the handwritten D9 and D8. You said that these data do pertain or I should say these numbers do pertain to data that's on the spreadsheet contained on the thumb drive?
A. Correct.
Q. Let's move to the next page then which appears at least to me -- it doesn't have the handwriting and the checkmarks, but it appears otherwise to be the same as the page we just looked at with the handwritten D9 and D8; is that correct?

A Correct.
Q Is that just a printout from before you had gone through your check with your GIS person?
A I think it was a printout in which I did not get a good resolution of the numbers so I printed it out again either on a different printer or with a different print instruction so the numbers were clearer. So you could consider it a poor first effort at printing it out.
Q All right. I understand. And then the next page is double sided. On the first side at the top it says Census Tracts Entirely Within AD 8 and has a number of tracts and some handwriting. Then on the flip side it talks about AD 9. Can you explain this document to me, please.
A Yes. This was my quality control check to make sure that I had included all of the tracts that are entirely within each district, AD 8 on one side of the page and AD 9 on the other. And then there were some census tracts that were split where only a portion of the census tract was within a district. What I did in these cases was looked at the map and developed a fractional allocation so that I could take the population of a given tract and say 85 percent of it was within

one district and 15 percent was within the other district or 85 percent was within District 8, 15 percent was not within District 8 or was not within either district. So the numbers that you see there are my notations to develop those fractions.
Q This is on the first page. If we look up at the top where it says Census Tracts Entirely Within AD 8 and it has tract numbers ranging from 164 to 1865 -- do you see those?
A Yes.
Q And so those tracts were entirely within AD 8?
A Correct.
Q And there was no sort of -- you didn't have to do any allocation at all with respect to the populations in those tracts; is that correct?
A That is correct.
Q Now, just to the right of there there is some handwriting. What does that handwriting -- generally speaking what does that pertain to?
A Let me just study this for a moment. I think I was doing some preliminary computations of the Hispanic share of the total population and of the citizen voting age population. That's what it looks like.

Q The numbers that you have there that you're using, do those represent any specific data that you were working with?
A I believe that they were based on the aggregation of these tracts into districts. I'm not sure what the calculation referred to here. I know it was a preliminary one just to get an idea of whether the numbers looked plausible based on the aggregation. And I don't know whether this refers to both districts together or to either one of the districts. I don't know what that calculation refers to. I just know that it was a preliminary one.
Q All right. We're going to have to break in just a minute here. I know Ms. Lazar and Mr. Hodan need to take a phone call. Let me just ask you, below that there is a section that says Census Tract Split Within AD 8. Do you see that?
A Yes.
Q And then it identifies tracts ranging from 157 to 1874, correct?
A Correct.
Q Now, you have multipliers that are just to the right of those numbers, correct?
A Correct.

Q And those are the adjustments that you said that you made?
A They are not adjustments. They are the fractions that I used to allocate the populations of the census tracts to one or another or both districts.
MR. POLAND: We're going to have to break there for just a couple of minutes.
(Recess)
Q Dr. Morrison, just before we broke we were taking a look at Exhibit 49 and some of the individual sheets within 49. Where we left off was on the sheet that says at the top of it Census Tracts Entirely Within AD 8. Do you have that sheet in front of you?
A I do.
Q More specifically we had focused our attention just at the time that we broke on the portion of this page that says Census Tracts Split Within AD 8. Do you recall that we were discussing that?
A Yes.
Q All right. I would like to take you back down to that again. We can finish off that discussion. I was asking about the handwritten numbers that I had used the term multipliers and I think you used the term fractions that are handwritten in next to

those tract numbers. Do you see that?
A Yes, I do.
Q So I would like to ask you about those. Can you describe for me again just generally so we get our train of thought set here what those numbers are.
A Those are my allocations of a census tract's population where the tract has been -- where the tract is classified as a split tract.
Q So part of the tract is inside Assembly District 8 and part is outside Assembly District 8?
A Correct.
Q By the way, I haven't done this yet. I want to make sure that we're on the same page with this. When we're talking about Assembly District 8 and Assembly District 9, we're talking about those assembly districts as they appear under Act 43, correct?
A Correct.
Q Not as they're currently composed before Act 43 goes into effect, correct?
A They're what I refer to as the enacted assembly districts.
Q Under Act 43, correct?
A I believe it's under Act 43. I just refer to them as enacted, the ones that have been enacted.

Q Fair enough. Looking at that first number for Tract 157 -- do you see that?
A Yes.
Q Right after that it looks like it says times 0.85. Do you see that?
A Correct.
Q All right. So what does the 0.85 indicate?
A That is my fraction that is used to allocate 85 percent, or the fraction .85, of everything in Census Tract 157.
Q All right. Now, when you say everything in Census Tract 157, what do you mean by that?
A Total population, Hispanic population, voting age population, Hispanic voting age population. In other words, every metric that I look at -- 85 percent of that metric, if it is an absolute number, is within Census Tract 157.
Q All right. And then the remaining 15 percent --
A I'm sorry. Is within Assembly District 8.
Q And so the remaining 15 percent then of everything within Census Tract 157 you counted as being outside of Assembly District 8?
A Correct.
Q Now, how did you come up with that number of 85 percent?

A By looking at the geographic territory on one of the maps that shows the -- I believe it will be in the stack of maps that are paper clipped together, the fifth map in. It is the one that has the hand notation D8 and D9 and a series of checkmarks by each census tract. It is the one that precedes the version that I said was a poorer printout, a less legible printout.
Q All right. So as I look at that sheet and I look at Census Tract 157, that's the block that has the number 157 in it?
A Correct.
Q So I see that there is a light shaded portion that is sort of across the top and most of the block and then a darker shaded portion that's sort of off to the left there; is that correct?
A Correct.
Q Now, how did you decide on the 85 percent/15 percent split?
A By examining the boundary of the Tract 157 and distinguishing the lighter portion from the darker portion and gauging the allocation of basically the geography of that tract as 85 percent lighter, 15 percent darker.
Q Were there any actual measurements that went into

that allocation or were you eyeballing it?
A This would be a careful eyeballing of it having done so many times before in many other instances.
Q All right. Is this allocation method that you used something that you have seen used by other demographers before in similar situations?
A Yes.
Q Is it anything that is identified in any of the published literature in terms of methodologies on how to allocate census tracts?
A I don't know if -- I wouldn't be surprised if it's in the published literature, but I don't know if -- I can't give you a specific citation. I know that the Census Bureau itself in some of its technical documentation has procedures for allocating territory when it changes the boundaries of census blocks and census tracts from one census to another and this is one of the techniques, this is one of the methods that it uses.
Q And so you adhere to the Census Bureau's techniques in carrying out your allocation?
A I used one of the approaches that they have used although it is a matter of simply allocating on the basis of geographic territory. So if you

asked me did I measure it with a ruler? No. The eyeball technique would be simply looking at it and saying it's roughly 15 percent/85 percent.
Q It could be 80 percent/20 percent? It could be 87 percent/13 percent?
A It may not be exactly 85 and 15, but I would say that's a close approximation.
Q Now, that approximation also is done without respect to where the population actually lies within Census Tract 157, correct?
A It is done strictly on the basis of the tract geography.
Q So, for example, let's just -- this is a hypothetical. If there were very densely populated apartments within the darker shaded portion of Census Tract 157 and in the lighter shaded portion there were scattered single family houses, and, again, this is a hypothetical, the 85/15 split wouldn't accurately reflect the actual population, correct?
A Under that hypothetical it might not.
Q Did you do anything to study what the makeup of Census Tract 157 was in terms of apartment buildings, single family homes, industrial facilities or manufacturing facilities?

A No, I did not.
Q What about for any of these tracts that were in the analysis where you allocated portions of a tract to AD 8 and portions of a tract outside AD 8?
A No. I didn't do that in any of those cases because that is not how it was done in the Census Bureau's procedure that I followed.
Q Where does one find the Census Bureau's procedures that you followed?
A I believe that is contained in one of the documents. It's either one of the hard copy documents or it's on the thumb drive. I can't remember the exact title of it, but it's something that essentially says something to the effect here are the steps that I followed to do something or other, and it was a procedure that talked about allocating territory that involved census tracts where there was some water involved like a lake. I don't know which document it is, but I know it's on the hard drive or in the hard copy.
Q All right. I quickly glanced through some of the titles of some of the files, and I quickly looked at the file names. I thought I saw something like that. I just wanted to see if I can bring it up

here so I can make sure that I understand.
A It will make some reference to the Census Bureau procedure for -- it has to do with how the Census Bureau deals with split blocks going from census geography in one census, such as 2000, to Census 2010. It may be that there is simply a hot link to a website on the Census Bureau website that explains it, but I know that there is a reference somewhere because I remember using it.
Q To make sure I understand, why would the change from 2000 to 2010 be something that would involve the splits in the census blocks?
A It doesn't involve me. It involves the Census Bureau's procedures. This derives from the Census Bureau's need to explain how it deals with changed geography when it used a census block in 2000 and then in 2010 it decided to use a different piece of geography possibly consolidating two blocks that may have become an industrial area or had become a single block or possibly a block that had been divided in some way by the Census Bureau for enumeration purposes. So they set forth a set of principles that allow a demographer to go in and say if I am looking at this particular census block in 2010 for which you reported data and I

want to go back and say what was the population of that piece of geography in 2000 even though then might have been let's say part of a larger entity, the Census Bureau provides -- I think they call it an equivalence file. For every single block that doesn't match perfectly I believe they have an equivalence file that says essentially this block used to be these two blocks or 10 percent of that block 90 percent of that block. So there's an equivalency file so it's possible to -- this enables people who need to do so to compare the population over the two decades of the censuses for the same piece of geography.
Q I think I understand. And that's at the block level; is that correct?
A I believe so, yes.
Q And the block level is the smallest level of data that the Census Bureau keeps?
A That's correct. Just so we're clear on it, it's called a census block. It almost always corresponds with what we would think of as a city block although in a non-urban or rural setting a census block could encompass a very large area of semi-populated or un-populated territory.
Q What is the next size that the Census Bureau keeps

up from a census block? What's the next smallest size of geographical information they keep?
A That's a census block group.
Q That's a block group. All right. How many blocks are in a block group?
A That varies. I believe it is always more than one. In a city it would typically be maybe anywhere from four to eight. But it varies widely. It could be a large number or it could be just two.
Q All right. And then after block group what's the next smallest geographic area of data that the Census Bureau keeps?
A That would be a census tract.
Q That's the tract. And the tracts, it looks like from the documents you have given, that the tracts are varying sizes as well?
A Varying sizes geographically, yes.
Q Now, the allocation that you performed of census tracts, could you have gone down further to the block level to make any more precise determination for the purposes of allocating population?
A Not without an immense amount of effort because I would have to deal with every single census block in all of these tracts and line up the equivalency

of those blocks. Probably it could take days or weeks of effort.
Q So it is possible. Let's just use 157, Census Tract 157, as an example. It would be possible to test your allocation, the 85/15 percent by going down to the census block level and trying to do the same allocation only using the census block data?
A I believe it would be, yes.
Q That is not a check of your allocation that you performed; is that correct?
A I'm not following your question.
Q In other words, you didn't perform a check of your allocation by going to the census block level and seeing whether using the census blocks your allocation is essentially the same as what you would find doing the analysis on the block level?
A No, I did not.
Q The next one on your list of census tracts that were split is 163. I see a handwritten times 0.1 next to that, and then there's an arrow over and there's a 0.15. Do you see that?
A Yes.
Q What does the 0.1 and then the arrow and 0.15 indicate?

A That indicates that I revised my initial eyeball view of it, which was 0.1, to 0.15.
Q So in Census Tract 163 you then allocated 15 percent of everything within that census tract to Assembly District 8, correct?
A I want to locate this on the map to be sure that we have got -- I'm trying to locate 163 here.
Q It's pretty much center of the page. It's kiddy corner to 157. If you look just to the lower --
A I see. Right.
Q To the left.
A Right. Yes. I allocated 15 percent of that to District 8.
Q And, again, this is something that you did eyeballing it. You did not check that by going to the census block level and looking at census blocks?
A Correct. I didn't feel there was any need to do that because this is a procedure that the Census Bureau follows in this kind of situation.
Q Did you have anyone else take a look at the allocations that you had done to make a determination about whether they thought that the allocations you were making were appropriate?
A No.

Q As we go down the list then, and I'm not going to go through all of them, all of the way down to 1874, is it correct to say that where you have a number that is written over to the right, so, for example, looking at Tract No. 169, you started out with 0.4 and then you've got the arrow and it's 0.45. Is it correct to say that the number on the right is the number that you finally used for your analysis?
A That's correct.
Q Is there a reason that you would have changed these numbers, anything that you did that you can recall specifically, to make a determination that with using the example of Census Tract 163 that the 15 percent was a better number to use than the 10 percent?
A Yes. Let me give you an example with 163 because that will I think show you how I proceeded. I started out with Assembly District 8, and you will see that I then went over to Assembly District 9 on the other side. So my procedure was to start out with Assembly District 8. I looked at Census Tract 157, and I said that looks like -- I'm sorry. Let's take 163 because that's where I made the change. 163 I looked at the -- my first look

at it from the perspective of how much of 163 is in District 8 and my initial eyeballing was 1/10th of it. I then went -- if turn the page to see 163 on the other side, I had put down .9 as the other portion of it in Assembly District 9. When I went through and reviewed it a second time, I looked at it and I said I think it looks more like an 85/15 split and so I changed it. That was purely kind of a check on my own initial impressions.

Q But there wasn't any further analysis or calculations that you did, and by analysis I mean data analysis or calculations, that you did to revise that split?

A No.

Q Is that right? Now, as you pointed out, Dr. Morrison, you do have -- at the bottom of the page Census Tracts Entirely Within AD 9 and then that follows on the back page and we have tracts between 158 and 214 all of which fall entirely within AD 9, correct?

A Correct.

Q And then we have got a list of census tracts split within AD 9, right?

A Correct.

Q And that runs from Census Tract 133 through 1868?

A Correct.

Q The numbers that appear in handwriting next to those census tract numbers again are the fractions of those split census tracts that you allocated to Assembly District 9, correct?

A Correct.

Q Now, I want to turn back over to the first page. I was looking at this while we had broken, and I wanted to draw your attention to the handwriting in the upper right-hand portion of the page. I'm going to need to bring you back to your original report because I think I figured out where this number is and I want to play with that a little bit. Do you have Exhibit No. 32 in front of you?

A That's my initial report, correct?

Q Correct.

A Yes, I do.

Q Terrific. Would you turn to Page 7 and specifically to Table 2 on Page 7.

A Yes.

Q If you look in Table 2, you will see around the middle of the table a line that says Citizen Population 18 and Older CVAP.

A Yes.

Q If you go down two lines, you will see Percent

Hispanic?

A Yes.

Q And then if you look within Assembly District 8, you will see a number 40.9 percent?

A Yes.

Q Now, if we go back to the handwritten page of the census tracts entirely within AD 8, you will see -- at the bottom of the handwriting on the top page you will see 40.9 percent. Do you see that?

A Yes.

Q Do those two numbers pertain to one another?

A I am assuming and I'm quite sure that the handwritten numbers on the page that we're referring to with all of the census tracts within different districts was a preliminary calculation that I had made, and it may be that that preliminary calculation in fact was the correct calculation that made it into Table 2 of my report. For my purposes, the preliminary calculations on this sheet of paper with all of my handwriting and the different census tracts and how they're split was simply an effort to do a reality check to see whether what I was coming out with were numbers that were plausible or very close to what they should be because if they were

not it would have indicated that there was some error in the allocation procedure that I needed to go back and correct. It might in that case have been a basis for my wanting to do something like you described before of actually checking a particular census block to see whether it was all apartments in one corner of it. It's essentially a reality check to see whether the numbers are fitting with what the gross numbers are that the census had counted.

Q I would like to understand what the numbers are here in handwriting to the extent that we can tell. The handwritten numbers -- at the top there's a 34,239 and then there's a slash next to it and then 55,13. I don't know if something was cut off there or not. Perhaps it was. Can you tell me what those numbers are. Do you see the numbers?

A I see them. I honestly don't know that I can tell you, but let me see if I can figure out what I had in mind there. These were just to see whether these numbers were in the ballpark of what they should be. I know that what I meant there where you see the two words ADJ Percent and then below it another ADJ Percent -- one of them refers to

the Hispanic total population. The other one refers to the Hispanic citizen voting age population based on the five-year ACS file.

MR. EARLE: Can you have ask him to highlight those numbers.

Q Dr. Morrison, I've been asked if I can have you highlight the handwritten numbers on the page that says Census Tracts Entirely Within AD 8.

A Yes. You wanted me to highlight what, the ADJ portion that I just mentioned?

MR. POLAND: What did you want?

MR. EARLE: Yes.

A This is in the upper right-hand corner.

Q Correct.

A The ADJ Percent Age total in handwriting, that's the Adjusted Percent Hispanic Total Population, and then the Adjusted Percent CVAP 2006 to 2010.

Q And the number that I had asked about, the first one, was the 34,239. And then there's the slash 55,13.

A Right. I see what I was doing there. What I had done there was my initial allocation was telling me that the numbers were coming out roughly 33,941 as a percent of 54,010, and that number -- I was able to make that number closer to the true number

shown in Table 2 by reexamining the spacial allocations and seeing where I had made some slight misjudgments and correcting those misjudgments so that the numbers came out to be very close to what the Census Bureau was measuring in the data shown in Table 2. So this was basically making these data converge on what the true Census Bureau benchmark numbers are.

Q So when you say the Census Bureau, the true numbers in Table 2, what are you referring to in Table 2?

A In Table 2 I'm referring to the numbers for the total population under the column Assembly District 8 and Assembly District 9. And what I am getting with the approximations of the split block allocations are numbers that are very close to those numbers. By looking at the census tract allocations that I had made initially and refining them I was able to get the numbers to approximate the numbers in Table 2 even more closely.

Q I want to make sure I understand the numbers that you were comparing. I think I'm going to go -- you said census blocks. Did you mean census tracts?

A Census tracts. Right.

Q So initially you had written 33,941. I understand that was an initial allocation, but what did that 33,941 refer to or represent?

A That would have referred to the total Hispanic population in District 8 as I had approximated it by combining the census tracts wholly within AD 8 and the census tracts that were split.

Q All right. So that was a number that you were comparing to which number on Table 2?

A I was not actually comparing the 33,941 to anything. I was comparing the 54,010 which is the denominator below it. That's the total population, and that's the one for which I would have a total population count in Table 2.

Q So the total population. In other words, not just limited to Hispanics. That's everybody within that tract?

A Correct.

Q So the 54,010, which is the denominator, the total population, what number does that match up with then in Table 2?

A That matches up with the 57,246.

Q All right. So that's what you were trying to get as close to as you could?

A Well, I used the 57,246 as a benchmark number, and

my allocation has gotten me very close to it but not as close as it might be, somewhat short of it. So I reviewed my allocations and said are there any places where I may have underestimated by eyeballing the fraction. Then you will see -- for example, if you look at the split tracts for AD 8, the Tract 163 where I had originally said .1 and then I changed it to .15 -- in reviewing that, it appeared to me that I had perhaps underestimated it and therefore that would account for some of the disparity between the 57,246 benchmark from the census and the initial 54,010. So I went through and again sought to refine my allocations recognizing that there may have been some tracts where I had slightly underestimated the fraction for AD 8 and made the adjustments. As you can see, I think they're all adjustments in an upward direction. I essentially said where have I perhaps underestimated the fractions slightly, and it's typically in a case where there's a tiny sliver somewhere but the sliver is perhaps a bit larger than it looked. So I made those adjustments. Then you can see that in my handwriting where you see the line on the center of the page in large bold type that says Census

Tracts Split Within AD 8, you can see that I had an initial number that was -- I was coming up with numbers 52,613, 53,177. Those were numbers that I felt were understating the true population, and I then got -- I think that was the point at which I made some corrections and got to 54,010. 54,010 was still below the benchmark, so I went through and said where are my allocations possibly understating things and in the upper right-hand corner of the page you're looking at I finally -- I guess I did get it up to 55,13 something.

Q All right. Now, in Table 2 the total population all ages within AD 8 that's listed is 57,246. Do you see that number?

A Yes.

Q Where does that number come from?

A That number comes from the data that -- I referred in the footnote to data furnished by Joseph Handrick of the Reinhart law firm. I can tell you where that is on the thumb drive now.

Q Okay.

A When you get around to that.

Q Since we're there now, it probably is easier to do.

A Okay.

Q Where is it on the thumb drive?

A Okay. This is referring specifically to the data that are shown in my initial report, Table 2, the two right-hand columns, Assembly District 8 and 9. Those columns of data derive from a file that is in a folder in your thumb drive labeled Redistricting Data.

Q Just for the record, we have got copies of the flash drive. This is the flash drive for the record that's been marked as Exhibit 50 that was produced this morning?

A Correct.

Q I'm sorry, Dr. Morrison, the name of the subfile is?

A The subfile -- if you go into the folder called Redistricting Data -- do you see that?

Q Yes, I do.

A Go into that, and you will see something called ACT 43 Demographics.

Q Okay.

A Do you see that?

Q I do.

A All right. That was furnished to me by the Reinhart law firm. I don't know if they furnished it to me or if they said go to the website where

you can download this, but that is the document from which I obtained these data.

Q I understand that Mr. Handrick furnished it to you. Do you know where that data came from, where Mr. Handrick got it?

A My understanding is that the data are official data. I can't tell you what official means in that context, but it's the data one wants when you're talking about what are these districts for the record. Somebody has put it together, and I don't know if it's the official count of population, but it's -- I asked for the official data for the districts as enacted, and that's my understanding of what they are.

Q And you anticipated my next question. You said someone has put it together. I was going to ask. Do you know who compiled that data or how it was compiled?

A I don't. I don't. My understanding, though, is that it's not something that was compiled for me. My understanding is as a matter of public record that those are the official data.

Q When you say the official data, that would be coming from the Census Bureau or it would it be coming from some other agency?

A It would be census data put together by someone in Wisconsin who has documented for the record what is the official population of these districts from a legal standpoint as enacted.

Q I see.

A That's my understanding of what those data are.

Q I see. When did Mr. Handrick give those files to you?

A I can only say early on. It would have been -- it may show on the date there when they were saved if you can --

Q The date that shows on mine when I hover my mouse over it just says Modified 12/9/2011 5:00 p.m.

A Then it would have been somewhere -- probably somewhere in early December I got it.

Q Actually, there are two different files with that name on here. One says 12/2/2011 and one says 12/9/2011.

A Okay. I would have gotten it on 12/2. I think it may have been either an xls file and then I saved it as an xlsx file or something. The earlier date would be approximately when I received it.

Q I think you have explained the discrepancy there between the names. It looks like there are different icons, so one is just different versions

of the Microsoft software?
A That's correct.
Q All right. We were just comparing the 33,941 number that you had in handwriting. I'm sorry. The 54,010 number to the 57,246, and then that got revised up to 55,13 something, correct?
A Correct.
Q And the 55,13 something number, is that the final number that you used for your calculations?
A I believe that was the final number that I used to judge the accuracy of my allocations as offering a very close approximation to what the true census numbers were.
Q All right. Now, underneath those numbers that we were just looking it said 62.8 percent H Total and that got scratched out and 62.1 was written in. What is that number?
A I suspect -- actually, I would have to speculate here. I don't know if you want me to speculate.
Q To the best of your recollection.
A All right. I can tell you that all of these preliminary numbers where I've crossed out one number and put in another number are my efforts to improve the close geographic approximation. So I would have been calculating on a preliminary

basis. If I had a better approximation of the district by altering the splits, how would it change the Hispanic share of the population. Whatever the comparison was there between the 62.8 and 62.1, I was satisfied that it made virtually no difference in the Hispanic share. Had it gone down from 68.2 to 55 something, I would be concerned that there was a piece of geography that I had moved that had an enormous number of one group in it and that one would be arbitrarily moving territory without being aware of what was going on. So that was, again, just a check on the accuracy of my procedure.
Q As you were going through these calculations and making some of the changes, did you have anybody who was working with you that you were bouncing ideas off of that was doing any checks on your calculations?
A No.
Q Did you have input from anybody else as you made the calculations themselves?
A No. None whatsoever.
Q Now, underneath the 62.1 percent H Total you have got -- it says 2006-10. What does that indicate?
A That refers to the Hispanic citizen voting

population, the Hispanic share of the citizen voting age population, based on the American Community Survey five-year file.
Q So the Hispanic citizen voting age population is one that you're calculating using the ACS data from 2006 to 2010; is that correct?
A Correct.
Q And the total population numbers that you are taking for AD 8 and AD 9, do you know whether those were based on ACS data?
A I'm sorry. Could you repeat the question.
MR. POLAND: Could you read it back.
(Question read)
A No. The total population numbers are not based on ACS data. They would be based on a total census enumeration for each of the census tracts.
Q And that was 2010 data, correct?
A Correct.
Q Now, below that you have written in Adjusted, or ADJ, which I assume is adjusted, Percentage HCVAP. I assume that's Hispanic citizen voting age population, correct?
A Correct.
Q And you have got 10,816 and it looks like you

divided by 2,641 and then there's some number after that that appears to be cut off on the copy that I have.
A Right.
Q What are those numbers?
A Those numbers, the 10,816 divided by 26,4 cut off, are the numbers that are shown in Table 2 of my initial report in the center of the table on the column labeled Assembly District 8 where I've shown the American Community Survey data. In that table, Table 2, I show 26,440. That would be the denominator, and 10,816 as the Hispanic number of the citizen voting age population. So what I have shown highlighted here on the page we're discussing with all of the data and the checkmarks is the number of Hispanics among the citizen voting age population. According to the ACS those are the numbers that are shown and the numbers crossed out appear to be the numbers that I had accumulated based on aggregating the census tracts wholly and partly using my allocation formula. To the best of my recollection what I was doing here was establishing that the Hispanic share of the citizen voting age population was 41.7 percent by my eyeball method aggregating things and it should

agree closely with the 40.9 percent which is what was shown in the Assembly District 8 population according to the source that I got from Joseph Handrick.

And I would mention just for the record and keeping in mind that for Assembly District 8 the data from Joseph Handrick would themselves have been based on the ACS data, so they are based on a five-year -- I believe they're a five-year estimate from ACS. So the fact that my 41.7 was very close to 40.9 reassured me that my allocation was very close to being perfect.

Q I'm going to come back and ask you again just to -- so the 10,816 number, which is both in your handwritten notations in Exhibit 49 and then also in Table 2, -- that is a number that came from the spreadsheet that you got from Mr. Handrick; is that correct?

A That is correct.

Q And you believe that was taken or you know that was taken from ACS data?

A That's the only place he could have gotten it or that's the only place that anyone could have gotten it. Whoever assembled those data would have gotten it from that source.

Q Why do you say that's the only place that he could have gotten it?

A Because the Census 2000 did not ask a question on citizen voting age population.

Q All right. But did the 2010 census ask those questions?

A No. They do not. The 2000 census did, but not the --

Q But not the 2010? I maybe I misheard you on that.

A Correct.

Q The 10,816 number that was in the spreadsheet Mr. Handrick gave you, do you know, was that extracted from some specific data within the ACS or was there anything that was done to that to change it somehow or alter it?

A I don't know. I just want to add for the record that as I look at this number where I've said citizen -- the center portion, the center rows, block of rows of data in Table 2 where we're talking about now the citizen population 18 and older, CVAP -- I don't know whether the data shown here are the data that I derived from Joseph Handrick's document or whether I got these directly myself from the American Community Survey. The footnote below -- I could resolve

this by simply looking at that spreadsheet. I don't have it before me. Some of the data, the data for Wisconsin, the column labeled Wisconsin, and the column labeled Milwaukee County, were data that I had assembled from the 2006 to 2010 ACS. Those are footnoted in the source. The footnoted source that says Excel File of Assembly District Population Composition Furnished by Handrick -- to the best of my recollection it is those data that are shown in the columns Assembly District 8 or Assembly District 9. But if those data do not exist in the data that Handrick furnished, then I would want to say for the record that I must have gotten them directly from the ACS myself.

Q Just to make sure we get this right on the record, let me just pull up that file. I've actually got it pulled up here.

A All right.

Q I don't know if you want to take a look at it on my computer.

MR. EARLE: Can we go off the record for a second.

MR. POLAND: Sure.

A I think it would be best if we resolve it now so I can answer your question for sure.

MR. POLAND: Let's go off the record.

(Recess)

Q Dr. Morrison, just before we broke we were looking at a number that appears both in Table 2 of your report that's Exhibit 32 and also it's in handwriting on one of the pages of Exhibit 49. That's the number 10,816. Do you recall our discussions about that number?

A Yes, I do.

Q And I had asked you where that number comes from, how it was derived. Do you recall our discussion about that?

A Yes.

Q And we have looked at some documents here off the record as we took a break. Are you able to show me now based on the documents that were produced where that number came from?

A Yes. The numbers we're referring to are numbers that I must have calculated myself based on 2006 to 2010 ACS data because they do not appear in the Excel file furnished by Joseph Handrick. I believe they will be somewhere in the documents that if you scroll ahead in the hard copy -- actually, lift up the two things you just had

there. Lift the whole thing up. Does that say 2006 2010 ACS?
Q I do see that.
A Okay. There are some data -- the page that we're referring to here has in the upper left-hand corner 2006 2010 ACS, and then at the bottom I've got written in handwriting Whole CTs. The name of the file is ACS -- I should say the name of the file below the spreadsheet, which is how you would be able to locate it among my spreadsheets, says ACS 2006 2010 Analysis.xlsx. I believe that that is the full Excel spreadsheet of which this is just a single page printed out that will have all of the calculations that went into developing the citizen voting age population data from the ACS. That spreadsheet should have all of the calculations in it.
Q So the 10,816 number, if we look at that -- if we look at the page that you were just talking about, which is the 2006 to 2010 ACS table, that's a printout of a portion of the spreadsheet you mentioned. We don't see that number on this page; is that correct?
A Correct. You don't see it on that page, but that number would you have derived from the analysis

contained in that spreadsheet of which there are probably many more pages and I believe several sheets in the spreadsheet itself.
Q So that number then came from your analysis of five years of the ACS data?
A Correct. That's what I wanted to clarify. It came from my analysis not from the file furnished by Joseph Handrick.
Q And the ACS data that it was based on, that ACS data was collected between 2006 and 2010?
A That is correct.
Q Does that data pertain to any particular geographic area?
A Yes. The data that are in the spreadsheet file are for census tracts.
Q So for tracts as opposed to blocks, correct?
A Correct.
Q And then as far as geographic areas is concerned, is it the whole United States? Is it Wisconsin? Is it Milwaukee County?
A I believe it is -- when I say it, I'm referring to the spreadsheet. I believe that spreadsheet refers just to the census tracts that are wholly or partly within Assembly District 8 or Assembly District 9. That's my recollection.

MR. EARLE: I hate to ask, but could we have -- we're talking about this, right?
THE WITNESS: There are several pages that look like that.
MR. EARLE: Could we have this marked as a separate exhibit so it's readily available in the transcript without thumbing through the whole thing relative to this discussion.
MR. POLAND: Sure. Why don't we mark it as 49-A. Does that make sense?
MS. LAZAR: Are you talking just that one page?
MR. POLAND: Yes.
MR. EARLE: Thank you.
(Exhibit No. 49-A marked for identification)
Q Dr. Morrison, I'm handing you a sheet that the court reporter has marked as Morrison Exhibit 49-A.
A Correct.
Q Can you identify that for the record, please.
A Yes. That is a printout of a portion of the spreadsheet that is contained on your thumb drive

that I turned over. It is in the file entitled ACS 2006 2010 Analysis.xlsx. It says Page 1.
Q And that was a portion of the documents you brought with you this morning, correct?
A Correct.
Q And the full spreadsheet is on the thumb drive that was turned over this morning?
A That's correct.
Q All right.
MS. LAZAR: You can put that back where it was in order.
Q The denominator in the calculation in your handwriting on the page that has the census tracts entirely within AD 8, that number is 264 and then it was cut off. Is it your recollection that that corresponds to the 26,440 number in your Table 2?
A That's correct.
Q And that number also is one that you would have derived from the ACS data?
A That's correct.
Q It would also be contained in the spreadsheet we were just discussing?
A Yes.
Q So then your 40.9 percent calculations that you had made in handwriting there is just the division

of the 10,816 into the 26,440?
A Correct.
Q I would like to try to continue to move through the documents here that are produced.
MS. LAZAR: Before you do that, we wanted to go back. You had asked us during the first break to identify where three pages came from, and we can give you that information now.
MR. POLAND: That's right.
Q The bottom of the page again reads Wisconsin stp76-55.xls?
A Correct. Where you will find that on the thumb drive is in a folder entitled 2000 Census Data. And within that folder you will see a file entitled stp76055.xls.
Q All right. Terrific.
MS. LAZAR: That's the first one.
THE WITNESS: That's the first one.
MS. LAZAR: I get that back.
A And then there's one that says Fix Line above it.
Q Yes.
A That one is contained in a folder entitled Redistricting Data, and the file itself is ACT43 Demographics.XLS.

Q Now, that was a file that you got from Mr. Handrick, is that correct, or am I misunderstanding?
A No. I do not believe so. I believe this is a file that built off of my analysis of the American Community Survey. Again, in the footnote it makes reference both to the 2010 American Community Survey and the 2006 to 2010 American Community Survey as well as to the spreadsheet furnished by Joseph Handrick. But I do not believe that any of the Handrick information is contained in this spreadsheet, the one that's called Demographic Accounting Model Juvenile Aging.
Q Maybe I misunderstood. I thought your testimony before was that the Act 43 Demographics Excel spreadsheet that you produced today -- that that was something that had been given to you by Mr. Handrick.
A No. The Act 43 -- actually, I think we're getting things confused here. The document we're looking at here that says Fix Line which -- the question to me was originally is this on the thumb drive. The answer is yes.
Q Okay.
A And, actually, let me just say if it's not in

the -- I don't know why I put down here ACT 43 Demographics. If you do not find it there, you will find it in the Demographic Accounting Model folder. That should be where it is.
Q Let me just see. As I look at the files that are in the Demographic Accounting Model file, I see one called Demographic Accounting Model and I see one called Hispanics' Share of Under and Over 18 CZN Pop.
A Okay. Open up the Demographic Accounting Model, and what you may see is two sheets, one of which is labeled Juvenile --
Q I see.
A That's where that piece of paper comes from.
MR. EARLE: What's it labeled?
THE WITNESS: Demographic Accounting Model - Juvenile Aging.
Q It's one of the tabs. You have got the Demo Accounting Model Mortality --
A Correct.
Q -- and then Juvenile Aging are both there within that?
A And the piece of paper that you have got in your hand that you're looking at -- you should see that on your screen.

Q A printout of that. All right. I see. I understand that. Do you recall which of the data from the Demographic Accounting Model Juvenile Aging table that you put together, which of that data came from Mr. Handrick?
A The data in the juvenile aging model would have come exclusively from my analysis of the American Community Survey data and none of them from the Handrick data.
Q All right. So what I'm trying to understand is you have got the note there in the bottom of that page that says Excel File of Assembly District Population Composition Furnished by Joseph Handrick Reinhart Law Firm.
A That is a footnote. That is a source that got carried over from an earlier spreadsheet. In other words, that source does not belong as a source in the Demographic Accounting Model Juvenile Aging.
Q All right. So if I scratched that off --
A Cross that off.
Q There's nothing in there.
A That's right.
Q Just to make sure that I was correct on the record and with my recollection of your testimony, one of

the files that you had produced to us here today was the Act 43 Demographics Excel spreadsheet that we had talked about before?
A. Correct.
Q. And that was provided to you by Mr. Handrick?
A. That is correct. Either provided to me or he gave me the link where to go for it.
Q. Understood. All right. And then there was one more document that you were going to take a look and see if it was on the thumb drive.
A. Right. This is the one -- the top line says Record Layout for Special Tabulation 76. This is not on the thumb drive. It is simply a one-page document that you have only in hard copy form with my notation on it.
MR. EARLE: That's the one we talked about earlier.
THE WITNESS: Right.
MS. LAZAR: Those were the three that you had inquired about and that Dr. Morrison looked at during the first break.
MR. POLAND: Right.
Q. If I recall your testimony about this special tabulation data, you had used it to calculate the

Hispanic share of citizen voting age population for Wisconsin and Milwaukee County; is that correct?
A. Based on 2000 census rather than 2010 census.
Q. You just mentioned that it's not on the thumb drive. Is this data that's been given to us or produced to us in any form?
A. Yes. There is an Excel spreadsheet that will be -- it will have a label that says stp. It will say -- I think it's stp76. Somewhere in there you will find a spreadsheet. I'm not sure which folder it's in. It should be in the 2000 census folder. If there's a Census Data 2000 --
Q. There is.
A. Open that up and see if there's --
Q. There is an stp76-55 and a Wisconsin stp76-55.
A. Those are the two that I worked with.
Q. Those are the two that you worked with?
A. Right. And this single piece of paper is the record layout for those databases.
Q. All right. So the databases themselves are actually within the material you produced to us?
A. Correct.
MS. LAZAR: If you can try to make sure that Mr. Poland finishes his question.

You're crisscrossing for the court reporter.
THE WITNESS: Sorry.
MS. LAZAR: Not a problem.
Q. Dr. Morrison, in the Act 43 Redistricting Data Spreadsheet --
MS. LAZAR: On the thumb drive?
MR. POLAND: It's on the thumb drive, yes. Act 43 Demographics.
Q. There is a reference to a person named Ryan Squires. It's not actually in the spreadsheet itself. Let me pull it up here. If I hover my cursor over the file itself, it says Author Ryan Squires. Do you know who Ryan Squires is?
A. I've never heard of a Ryan Squires.
Q. I would like to turn your attention now to in Exhibit 49 there's a paper clipped group of documents. The next one on the bottom says 2010 Combined for Calculating Non-H and there's some handwriting up at the top, City of Milwaukee.
A. Correct.
Q. What is that document?
A. This is a printout and some additional calculations, a printout of data from the Census Bureau, that reports voter registration and voter

turnout by race and Hispanic origin for the United States as of the November 2010 election.
Q. This is data that you obtained from the Census Bureau?
A. Yes.
Q. Did you obtain this data or was this given to you by somebody else?
A. No. I downloaded it directly myself.
Q. How did you use this data in your analysis?
A. First I believe I included a portion of this at the end of my rebuttal report to illustrate the kind of data that are available to perform an age standardized adjustment to registration rates. Secondly, I actually performed that age standardization a few days ago. I'm not sure if I have the results here or not.
Q. So this particular document that we are looking at here, and up at the top it says within the table itself Table 2 Reported Voting and Registration by Race, Hispanic Origin, Sex, and Age for the United States November 2010; is that correct?
A. That's correct.
Q. This is something that you used for your rebuttal report?
A. Yes. These are the source data for -- these are

the source data that I referred to in my rebuttal report and they are the source data that I actually used following submission of my rebuttal report to perform the age standardization and I believe the calculations are contained within the documents that I turned over to you somewhere herein.

Q All right. This is not a document that you used in preparing your first report, your initial report of December 14th; is that correct?

A No, it is not.

Q All right. Let's turn to the next page of this group of paper clipped documents. Up at the top the document states Other Reports Census Bureau, and at the bottom it looks like it was printed on January 5, 2012. It refers to other reports, P23 Reports, and some other things. Can you identify this document, please.

A Yes. This is a printout of other information that the Census Bureau offers on its website relating to voter registration and turnout.

Q And how did you use this particular page that you have printed out here?

A I didn't use it at all. I simply wanted to keep it in my file in case I needed to go back and look

at other elections.

Q So you did not actually go and look at any of the reports that are identified on that page?

A I did not, no.

Q If you look to the next page, there's a printout up at the top that says Voting and Registration in the Election of 2010 - Tables - Census Bureau, and there are some handwritten notations on this document. Can you identify this for me.

A Yes. This is an additional printout of what -- the first page that you're looking at labeled 2010 in handwriting at the top is a printout of all of the detailed tables that the Census Bureau has available on its website pertaining to the 2010 election, the November 2010 election. I had circled certain tables for certain purposes. The Table 2 which is circled, the Reported Voting and Registration, is I believe the one that we just discussed that I said I had used to perform the age standardization analysis. And then there are other tables that I have circled that -- in the case of Table 4b, I had circled it for possible use in another lawsuit that I'm involved in that I might be involved in. It gives information at the state level. Then I have another table, 11,

circled and starred as one to take a look at again in case I ever want to refine the age standardization analysis that I did.

Q So the Table 2 that you had circled is one that you relied on for your age standardization analysis in your rebuttal report; is that correct?

A It's for the age standardization that I said could be done in my rebuttal report, and then following completion of my rebuttal report it is the table that I used to actually perform the age standardization after submitting the rebuttal report.

Q Do you have a printout of what you did on the age standardization after you finished your rebuttal report?

A Yes. I do have it somewhere in here. I don't know exactly where it is.

Q We will come to it in other words?

A We will come to it.

Q So you will identify it for me when we get there?

A Yes.

Q Terrific. I don't want to bog us down with that now. I want to make sure I understand what we're looking at and dealing with. You mentioned table 4b. You circled that because it might be of use

to you in some other litigation that you might be involved in?

A Yes.

Q It says AZ there. Is that Arizona redistricting litigation?

A It has to do with Arizona. I'm not sure if it's redistricting. It has to do with Arizona, yes.

Q Are you doing some work potentially in Arizona that is similar to the work that you are doing in this case?

A I haven't been retained by anybody in Arizona yet. It's anticipating that I might be.

Q And then finally you circled Table 11. That's something that you might be interested in using but haven't yet used it. Is that fair to say?

A I see Table 10 circled, 10, 12 and 13. Are you talking about on the second page?

Q No. I'm talking about on the page that has 2010 in handwriting on the top.

A I'm sorry. Yes. Table 11. I have that circled, and my recollection is I circled that just because I wanted to take a look at it because it does not refer to distinctions by age so it's not going to be helpful for age standardization. I think I circled it as one to look at and then having

looked at it I decided that it was irrelevant.
Q All right. So you did not rely on that in any way?
A I did not rely on Table 11, no.
Q All right. The next page then you have got a handwritten 2008 up at the top.
A Correct.
Q It looks like it's two pages that are stapled together. You have a number of these tables that are circled as well, correct?
A Correct.
Q So Table 2 is circled and you have got written next to that it looks like For FAA.
A It's For PAA. What I had in mind there was it was a table that I could use for a professional presentation I'm going to make in the late spring at the annual meeting of demographers. This one on the 2008 page is simply the same Table 2 for 2010, but it would refer to the presidential election of 2008. I circled that in order to remind myself that if I needed to do it for that election I had the same data available.
Q Did you use the 2008 Table 2 for any of your work in your rebuttal report in this lawsuit?
A No.

Q You have other tables that are circled there as well, 4a, 4b, Table 10, Table 12, Table 13. Did you use any of those tables in your work in your rebuttal report in this lawsuit?
A I did not.
Q Did you use them in your work in this lawsuit?
A In no way whatsoever.
Q Let's set that to the side. I would like to go to the next page. The next page at the bottom says DemoAcctgModel-Mortality. Do you see that?
A Yes.
Q What is this page?
A This is a page that documents my calculations of survivorship by age and arrives at a factor for projecting the future voting age population based on the differential mortality of Hispanics and non-Hispanics.
Q Now, this I believe is something that was previously produced to us. I want to mark just quickly here two documents that we will take a look at. First of all, I'll mark this as a separate exhibit although I think this was actually contained in the documents you produced.
(Exhibit No. 51 marked for identification)

Q Dr. Morrison, I'm handing you a copy of a document that the court reporter has marked as Exhibit 51. Do you see that?
A Yes.
Q I believe this is a document that we saw in the materials that you produced this morning, correct?
A Correct.
Q This is a December 22 letter from me requesting certain material pertaining to your expert report and other expert reports?
A Yes.
Q I want to hand you as well a follow-up document.
MR. POLAND: Let's mark this one.
(Exhibit No. 52 marked for identification)
Q I'm going to hand you a document that's been marked as Exhibit No. 52. I would ask you to take a look at that for a minute or for as long as you need to to see if you have seen it before.
A Yes. I can see that this is incorporating the responses that I sent in saying here is what I have in response to the questions posed in Exhibit 51. And these have been incorporated now into Exhibit 52.
Q So just to make sure we have the sequence here,

you received Exhibit 51. It asked for the production of some materials pertaining to your expert report tendered on December 14th, correct?
A Correct.
Q And one of the counsel of the defendants transmitted that to you and as a result you gave them some materials, correct?
A That's correct.
Q And then in Exhibit 52 we see that on December 28th Mr. Kelly is transmitting some of those materials to me, correct?
A That's correct.
Q Now, if we turn to the Tab Number 1 under Exhibit 52 --
A Yes.
Q Do you see down at the bottom that says DemoAcctgModel-Mortality?
A Yes.
Q Is that the same as the table that you produced here today?
A It should be except that it looks like one of the columns is not wide enough to show the number. Let me just -- I think you see the one I'm referring to at the bottom there.
Q Actually, I don't.

MS. LAZAR: You're referring to a table in Exhibit 49?

MR. POLAND: I am. Thank you, Maria.

Q I'm referring to a table in 49 which are the documents produced this morning. For the record, this is the printed page that says DemoAcctgModel-Mortality and there are some handwritten notations on it as well.

MS. LAZAR: Here. This wasn't paper clipped. That's by itself.

THE WITNESS: Right.

A Just so there's no ambiguity, the one that has my handwriting on it -- if you compare that to Tab No. 1 -- if you look at Tab No. 1, toward the bottom, Age 18 you will see some hash marks in one of the cells.

Q Yes.

A If you want to -- just for the record, the hash marks, if you were to widen the column, would show that the number is 10.32 percent.

Q I see. Okay. All right.

A So that's cleared up. I'm now looking at the document with the handwritten notes on it.

Q Yes. In Exhibit 49.

A In the upper right.

Q Yes.

A And your question?

Q So you state at the top, "Be sure to proof," and it says, "Survival rates pre depo." Do you see that?

A Yes.

Q What does that indicate?

A When I performed the analysis, I had not yet double-checked all of the input data against the source data from the United States life tables. The checkmark above on the right-hand side indicates that I did proof it and I noted two small corrections which are written in in the bottom right-hand corner where I've changed the number 605,054 to 605,044 and below it the number 122,516 corrected to 122,505. Those are the corrections that I detected having double-checked the numbers.

Q I assume that since your percentages didn't change or you didn't handwrite any percentage changes in there in the 11.71 percent or the 4.60 percent that those two revisions you made that are reflected in handwriting did not change those percentages?

A That's what the checkmarks to the right indicate, yes.

Q How did you use this particular mortality model in your analysis?

A All right. The source of the data that are shown in the center block of columns entitled Five-Year Survival Rate derive from a publication which I've also enclosed which is entitled United States Life Tables by Hispanic Origin. The data that I used derive from Page 12 of that table or that publication and those data are entered into the -- they are entered into calculations that are shown in the cells of the Five-Year Survival Rate columns. So I have entered in the official life table survival rates, survival proportions, under the Hispanic and the non-Hispanic White columns and I have shown what percentage of a given group survives another five years into the future.

Q So what I've got open in front of me now are the United States Life Tables by Hispanic Origin which is a paper that you produced this morning and I believe also is attached to Mr. Kelly 's December 28th letter that's Exhibit 52.

A It should have been.

Q At Tab 2?

A Yes. That's correct.

Q All right. And then I also have opened in front of me this printout of your Demographic Accounting Model - Mortality table. I would like you just to walk me through here so I understand it, how you derive these numbers that are in your mortality table from the paper on Page 12.

A All right. If you go to the left-hand column under Milwaukee County entitled Hispanic and you read down to the row that says 40 to 44, you see the number 7,589. Those are 7,589 Hispanics in Milwaukee County of whom 99.11 percent will still be alive five years later.

MR. POLAND: We're going to have to take a break here because we have to change the tape.

(Recess)

Q Dr. Morrison, when we left off before our break, we were looking at the printout of your demographic accounting model, the mortality table or printout from it. Do you recall that?

A Yes.

Q All right. That was a page that you produced this morning with some handwritten notes on it. It's in Exhibit 49, or, for the purpose of the

questions I'm going to ask you, you can look at the Exhibit 52, the printout of it that's behind Tab 1. Either one way is just fine. I was asking you about that document also in connection with the report that you had produced, the United States Life Tables by Hispanic Origin, and we were looking specifically at Table H in that document. Do you recall that?

A Correct. I do.

Q I'm going to ask if you can have those two documents out in front of you.

A I'm all set.

Q Terrific. So on the mortality spreadsheet that we have here, I had asked you how you used the data within Table H in this spreadsheet, and I think you had begun to tell me about that. We might have to go over some of this ground here, but you had led me to the row in the mortality portion of the model that had the 40 to 44 years data I believe?

A Yes.

Q All right. Could you just explain that to me again.

A Sure. If you look in the column under Hispanic Total on the row that is Age 40, you will see the

number 97,048, and below that on the row labeled Age 45 you will see 96,187. The way one reads this is that of 97,048 Hispanics age 40 the mortality table shows that 96,187 of them will be alive five years later. If you divide the 96,187 by the 97,048, you will come up with I believe a fraction that is .9911 if I'm looking at the correct rows here. It's either those two rows or moving down one row. But in any case, what that says is -- if you look at my spreadsheet where I've got the five-year survival rate as .9911, what that says is that 99.11 percent of Hispanics 40 to 44 years of age will be alive five years later. If you look at the spreadsheet and go down from 40 to 44 to 45 to 49, so you're going from .9911 to .9867 to .9798, you can see the successive changes in survival rates as age increases. So as you refer to an older age group, the progressively older age groups, the survival rates are progressively higher.

Q Now, in the same row in your mortality spreadsheet you have numbers for Milwaukee County, correct?

A Correct.

Q So for Hispanic you have got 7,589?

A Yes.

Q Where does that number come from?

A That number comes from the 2010 census. The sources at the bottom of this are SF1 Tables P12H and PCT12.

Q Now, I noticed that you mentioned that's the 2010 census. It appears that Table H in the publication itself identifies the data as being from 2006; is that correct?

A That's correct.

Q Is there a problem mixing and matching the data from 2010 and the data from 2006?

A No. Not for the purpose I have at hand.

Q And why is that?

A First of all, the 2006 mortality data are the most recent available ones. Secondly, the age specific differences in mortality are what I'm trying to capture, not the absolute level. So were there a 2010 mortality table that might reflect some overall improvement in mortality that would affect the entire population, it would not materially change the different survivorship rates at different ages; that is to say it would not change the fact that the older you are the lower your survivorship. That relationship would remain intact.

Q And so for the other data that you have as well, the non-Hispanic and the percent Hispanic and the percent non-Hispanic, back here on the mortality spreadsheet, where do you take those numbers from?

A Those are all from the 2010 census Summary File 1 tables that are cited below.

Q Now, where do you use the analysis that's on the mortality spreadsheet in your calculations and opinions that are expressed in your report?

A Okay. If you apply the survivorship rates in the center of the spreadsheet; that is, the two columns called Five-Year Survival Rate, to the two columns to the left under Milwaukee County labeled Hispanic and non-Hispanic and you apply those, the Hispanic to the Hispanic and the non-Hispanic white to the non-Hispanic and multiply them out, what you get are the surviving voting age populations shown on the right-hand side as of 2015. Under Hispanic under Surviving VAP 2015 you have a column labeled Hispanic which represents the remnants of the 2010 Hispanic population that would be of voting age and at the bottom of that Hispanic column under Surviving VAP you will see the number 76,100 and that is the surviving number, 76,100, of the original 81,033 at the

bottom of the left-hand Hispanic column. So 81,033 voting age Hispanics in 2010 become 76,100 surviving voting age Hispanics as of 2015.

Q And where do these projections figure in in your report?

A If you then compare the corresponding -- if you make the corresponding comparison that I just made for Hispanics for non-Hispanics, you see 703,948 non-Hispanics end up as 605,044 non-Hispanic whites. If you then calculate the 2010 voting age population -- I'm sorry. The 2015 voting age population as a percent of the 2010 voting age population, which is shown in the bottom row, you will see that 93.9 percent of the Hispanics -- I should say the voting age population of Hispanics is 93.9 percent its size in 2010 whereas the non-Hispanic white component is 86.0 percent. That differential rate is the basis for my then calculating what the change is in the voting age population makeup over a five-year period.

Q All right. And that last part of it that you mentioned, where is that reflected in your expert report that's Exhibit 32?

A Let me see if I can find where that is for you. That would be reflected in Paragraph 22 on Page 8

where I state, "As older mostly non-Hispanic white voters inevitably die off with each passing year, juveniles disproportionately Hispanic will attain age 18 and replace them in the population of eligible voters. This ongoing demographic recomposition of the citizen voting age population will boost Hispanics' share of the electorate even in the absence of any further spacial mobility."

I would say that the quantitative analysis that we have been discussing in this mortality accounting model is my basis for saying that the ongoing demographic recomposition of the citizen voting age population will boost Hispanics' share of the electorate and that is apart from the aging of the juvenile part.

Q So this you don't actually -- the calculations that appear in your demographic accounting model on the mortality spreadsheet at least -- the calculations themselves don't appear in numerical format someplace in your report?

A I believe that's so. What these numbers do is -- what this mortality analysis does is it confirms that the effects of differential survival will further boost Hispanics' share of the electorate beyond the simple fact of juveniles aging into the

voting ages although I have not made an effort to quantify it and say it has X percentage point effect per year. I have shown over a period of time, over the period of time shown here, this is what you end up with.

Let me just double-check on that and make sure. I'm not sure if I -- let me just double-check the numbers here. Yes. I stand by that statement.

Q All right. Now in Table H, the data that are reflected there are data from the U.S. Census Bureau taken nationwide, correct?

A They're not from the Census Bureau. They're from the -- let me see the source on this. It's a different federal agency, the one that covers health statistics. Let me get you a source on that. I know I cited it. The National Center for Health Statistics. It's not Census Bureau. It's National Center for Health Statistics. It just doesn't appear on this particular document.

Q And those numbers that are created in Table H pertain to Hispanic population in the United States as a whole; is that correct?

A That's correct.

Q It's not limited to Milwaukee County or to

Wisconsin, correct?

A Correct.

Q Now, there are other reasons potentially why both Hispanic and non-Hispanic whites might no longer remain in Milwaukee County, correct?

A Why they might not remain? You mean physically --

Q Correct. From one year to another.

A Correct.

Q So, for example, people could be sent to prison, correct?

A Correct.

Q And that's not accounted for in this particular model, correct?

A You're saying am I accounting for the shift of Hispanics in Milwaukee County from residing outside of prison to residing somewhere in a prison?

Q No. What I'm asking is -- you're saying here that as people age they're replaced by younger people who mature into voting age, correct?

A That's not what's being accounted for in this mortality model. That's a separate model. What you're looking at in the mortality model is simply the effects of differential age structure.

Q Right. All right. Is there anyplace in your

report in making your projections about Hispanics as a growing portion of the population in Assembly Districts 8 or 9 or Milwaukee County where you account for anything other than mortality?

A. In this particular mortality part of the demographic accounting model I account for nothing but the effects of mortality given the different age structures of the Hispanic and non-Hispanic population.

Q. So Paragraph 22 is related solely to mortality. It's not related to any other factors, correct?

A. No. It is a statement that combines the effects of both the aging of the juvenile population and the effects of mortality. As the statement says, as older mostly non-Hispanic white voters inevitably die off -- that's supported by the Demographic Accounting Model - Mortality. That's confirmed by that analysis.

Q. All right. So when you say in Paragraph 22, "This ongoing demographic recomposition of the citizen voting age population will boost Hispanics' share of the electric even in the absence of any further spacial mobility," that's not taking into account anything other than the aging of the population mortality, correct?

A. No. That's taking account the aging of the population through mortality as well as the maturation of the juvenile population, those two forces together. Those two forces together are what induce the rise in the Hispanic share even if there was no geographic mobility and if no one moves around at all.

Q. Now, let's say somebody is under 18 and they go away and they go to college. Is that accounted for in your calculations that are reflected in your mortality table and included in Paragraph 22?

A. Would that be a Hispanic person or non-Hispanic?

Q. Either way.

A. Either way? No. Neither one is accounted for, and one could make any assumption that they go away to college and then return or that if it is a non-Hispanic college attendee, which might be the likelier case, that the non-Hispanic college attendee might complete college and move to some other part of the country.

Q. And similarly if somebody were to go to prison, that wouldn't be accounted for either in the calculations that you present here, correct?

A. Correct.

Q. I notice as well in your mortality spreadsheet --

we were looking at an example, the row 40 to 44 years. The cells of that table under Surviving VAP 2015 are blank for that row. Is there a reason for that?

A. I'm sorry. 40 to 44 years you say?

Q. Correct.

A. And which part of that one are you talking about?

Q. You have got Surviving VAP 2015. Under that column.

A. I see. I see what you mean. They're shown in the next lower row. In other words, five years later they're 45 to 49.

Q. Right. Why are there gaps there in some of the rows in that column?

A. If you let me just study this a moment I will tell you.

Q. Of course.

A. I know what I was doing here. What I was doing was I was ignoring the effect of mortality from -- you see on the right-hand side where it says Survival VAP 2015? I was carrying over the numbers directly from the left to the right so that if you look at 18- to 19-year olds I was saying 4,354 becomes 4,354 on the right side, 25,966 non-Hispanic become 25,966 on the right

side because the effects of mortality at these ages are so miniscule that they make no difference and there is no differential.

So what I'm doing in the spreadsheet is I am accounting for the differential age structure of the populations starting at age 40 to 44; that is to say in the middle adult years, middle or I guess you would say the middle adult years because the age structural differences in the 18 to 39 age range would not have any influence on the mortality experience. And the other problem that one has here is that you have single year gradations of age but you have got five-year mortality so it becomes a bit of a problem to aggregate them.

What I focused on -- you could say that this is, if anything, an analysis that would perhaps understate the effect of differential mortality, but it does focus on the age ranges where mortality is prominent which would be from age 40 to 44 onward.

Q. There are mortality or there are data regarding the survival that are given in Table H of the report, correct?

A. Yes, there are.

Q And so those numbers could be plugged into your column that's the five-year survival rate, correct?
A Yes. They could be plugged in. It would take quite a bit of manipulation, and I just didn't feel it was worth the time and effort given the fact that it would scarcely change the results. If anything, it would intensify the effect, and for my purposes I simply wanted to confirm that the effects of age structure here were visible and I could document the fact that the differential age structures of the two populations would in fact boost the Hispanic share of the voting age population. Were I to estimate the exact amount by which it did it, I could go back in and try to fill in those other values and get an exact estimate, but I just didn't think it was worth the couple of hours effort to do that.
Q Is it fair to say this is more of qualitative type of an analysis than a quantitative analysis?
A No. I would not say that at all. It is a quantitative analysis that fulfills the purpose of documenting quantitatively a minimum threshold level; that is to say it establishes that the effect that I suspected was there is there and

probably is there more intensely than I had estimated.
Q Do you know whether there are any data that -- you had mentioned that in Table H this is the most recent available data on survival. Do you know whether there are any more specific data that pertain to Wisconsin or to Milwaukee County?
A I believe if you read the entire report from which this was drawn, my recollection is that it was stated that this was the first of its kind for the nation. Let me just see it if I can refer you to this. On Page 1 of the Center for Disease Control document where it says Introduction -- I'm just reading down to about the second or the third sentence. It says, "As a result of considerable interest and demand for the production of reliable vital statistics for this population," the Hispanic population, "including mortality measures such as life expectancy exist, considerable interest and demand exist. Unfortunately, data quality problems prevented the production of reliable U.S. life tables for this population until now."
Q So this is the first such effort to put into a report this type of data?

A Apparently this is the first publication by the federal government of mortality data with this degree of detail for the nation, yes.
Q And you don't know whether there's anything that's been produced since then that's more specific to Wisconsin or Milwaukee County or are you pretty sure there is not?
A I don't know with certainty, but I am quite confident that there is nothing else available except in some unpublished internal tabulations that the National Center for Health Statistics has. I note that the publication date on this is October 2010, so that tells me that this is really very current.
Q Have you applied this same analysis to any other Hispanic populations in your work?
A I have not applied it to this degree of quantifying it, but I have made statements to the effect that I have made in this case based on a visual inspection of the age structure. It's a fairly straightforward thing to do. If you imagine one population in which just say for the sake of example an elderly non-Hispanic white population in which half of the voting age population is 65 and over and another minority

population in which only 10 percent of the voting age population is 65 and over, there are going to be a lot more people dying off from the former population than the latter. You don't need a set of mortality schedules to tell you that. So one knows that the effect will be to remove one group from the population through mortality at a much higher rate than the other one. This simply allowed me to quantify it because I had the survival rates for both populations.
Q You can set that document to the side. The next document in the ones that you had produced at least that is in my stack is the printout of the Act 43 Demographics.xls spreadsheet. Again, we have talked about this a bit before. That's a document, a spreadsheet, that's on the thumb drive you produced?
A Right.
Q And this was a spreadsheet that was given to you by Mr. Handrick?
A Yes.
Q You testified about that before. Did Mr. Handrick give you any other documentation in addition to this particular spreadsheet?
A No. I don't recall anything but this document.

Q Was this something that you requested from Mr. Handrick or did he simply give it to you to consider?
A I requested the demographic makeup of District 8 and District 9 in whatever form it was available, preferably with as many distinctions by race and ethnicity as were available, and this is what he provided.
Q Did you have any other parameters that you gave him when you told him you wanted the data or requirements of the data?
A No.
Q When Mr. Handrick gave you this spreadsheet, was that the first time that you had seen that specific data, the demographic makeup of Assembly Districts 8 and 9?
A I believe it was. I don't recall seeing anything like this before. I think it was the only source that I had other than his listing of the census tracts that comprised the districts.
Q Moving on then, I think that the next sheet in my stack is the ACS 2006 to 2010 Analysis.xlsx spreadsheet that we talked about before.
A And that's labeled as Exhibit 49-A.
Q And that is 49-A.

A I've got it here and I will keep it in the stack.
Q Terrific. The next one, the next document in the stack, it appears also has a title at the bottom ACS 2006 2010 Analysis.xlsx. Can you tell me what that document is.
A Yes. That appears to be a printout of one section of the spreadsheet that simply showed a comparison between Hispanics under age 18, Hispanic citizens under age 18, to Hispanic citizens 18 and older. This was apparently just a fact that I saw and printed out so that I didn't lose track of it.
Q So these numbers are taken then from the ACS data, correct?
A Correct.
Q And for the time span 2006 to 2010; is that correct?
A Correct.
Q Are these annual averages?
A No. They are not annual averages and they are not for 2008 exactly. The Census Bureau suggests that one refer to them as measures of Hispanic population during the period 2006 to 2010.
Q Do you know how they're calculated?
A Yes.
Q All right. How are they calculated?

A They are an aggregation of annual surveys. They conduct a survey, a national survey, in 2006 and they issue a file that says this is the 2006 survey but it's not a very large sample. Then they do it again in 2007. Once again you have a more recent year, 2007, that tells you the latest number, but, again, on the basis of a small sample. You do it again in 2008, and I think at that point they issue a three-year file and they say we can give you a larger sample, but it will be for a period that is more vaguely defined as 2006 to 2008. Then they go on for two more years. When you get five years of data put together, they add all of them together. They accumulate them into a sample that is five times as large essentially and say now you have got a large enough sample to start computing things at the census tract level or above with a very large margin of error, progressively smaller at the county level, at the state level. So the 2006-2010 data file for ACS allows you to make more precise statements or I should say with minimally acceptable precision for smaller pieces of geography but for a more widely defined span of time. To use an analogy, it would be as though

you said we would like to know what percentage of republican voters will vote for Mitt Romney and we have put together all of the surveys we have conducted over the last 48 months and the answer is a certain percentage. You would say it's good to know what that percentage is, but can you tell me what it was last week. The answer is no clue.
Q All right. So for example in the row that says Hispanics Under 18 Native and Naturalized there's a total number 25,295. That's an aggregated number over those five years?
A Correct.
Q And is that divided by five then?
A No.
Q That's just the aggregated number?
A I'm sorry. That is the number that is derived -- it's either derived from the fraction -- no. It's not an aggregation. It tells you that is the best estimate based on five years of survey data.
Q All right. So they have some statistical method that they use where they have got a distribution of values?
A Right.
Q That's a number that the ACS comes up with. It's not a number that you calculated?

A That would be a number that the ACS comes up with, and any demographer replicating what I did would come up with the identical number.
Q Just going to the ACS data?
A Correct.
Q The next page that I have has a printout on the bottom that says Wisconsin, and up at the top it's 2006-2010 ACS. Can you tell me what this is.
A Yes. This is a compilation of data from the ACS that refers I believe here -- yes -- to the State of Wisconsin as a whole, and it distinguishes all of the different categories that you see in the rows. It shows the total estimate of population on the top row, the Total row. The estimate of the total population is 5,637,947. That is the best estimate based on five years of data of the ACS. It then says, if you move over to the right, the Hispanic total population estimate is 310,549. And then the key figure from my standpoint is on the right-hand side, Hispanics would be 5.5 percent of the population based on the ACS.
Q Where did you use the data or the analysis that's reflected in this particular document in your own calculations and opinions in this case?
A I believe it will be reflected in one of the data

tables. It looks as though what I have here is the 2006 to 2010 ACS data aggregated up for the State of Wisconsin, but, as I look at Table 1 in my -- let me just double-check one thing here. Yes. In Table 1 of my report I have shown for the State of Wisconsin data from the ACS for the year 2010; that is to say for the final year of that five-year ACS period. What we're looking at here in this table is an alternative table based on the five years of ACS, and I don't think that I used the data from this five-year version because the one-year version sufficed for the State of Wisconsin.
Q Okay. Go ahead.
A What you can see here -- this is what happened. If you look at the paper, at the 2006-201 ACS table we were discussing, you see in the lower right-hand corner 2.73 percent?
Q Yes. That's the Native and Naturalized row?
A Right. That particular number is the Hispanic share of the citizen voting age population during the period 2006-2010, 2.73 percent. In my Table 1 under the column Wisconsin 2010 you will see that the corresponding percentage is not 2.73 but it's 3.0. And that says in 2010 I was able to get the

estimate as of that year and it was up to 3 percent whereas during the period 2006 to 2010 it was 2.73. So we have two versions of the information here. The 2010 number at 3.0 percent was based on a large enough sample, one-year sample, for an entire state that I could calculate 3.0 as an accurate rendition or a precise enough rendition of what the percentage is.
Q So the 2.73 percent that is identified in the spreadsheet that we have identified pertains to Wisconsin, that 2.73 percent is a citizen voting age population of Hispanics in Wisconsin overall in 2010 or from 2006 to 2010?
A That's correct.
Q All right. Why is it that you chose to go with the number based on the census data?
A Based on the 2010 ACS you mean?
Q I'm sorry. The 2010 ACS.
A I believe what I had at the time I was calculating the 2006 to 2010 ACS data I was calculating the Hispanic share for the State, for Milwaukee County, and for census tracts. So this is one page where I looked at the number to see what it was, and I may have had this 2.73 prior to going to the 2010 data to get the more current number.

So you could say that the 2.73 is a number that I did not rely on although I took note of it.
Q All right. Now, I note that there is a column called Margin of Error on the spreadsheet as well.
A Correct.
Q And what is that margin of error measuring?
A That is measuring for -- in each of the columns it is giving you the statistical estimate of the range of possible values given the ACS measure of the margin of error. So what it's saying is if you look under the Total Estimate column on the left where you have at the bottom of that column Native Plus Naturalized in the shaded row and it says 4,160,993 -- what that is saying is that that number, 4,160,993, could be as high as 4,164,215 or as low as 4,157,771 within a confidence band of I think it's 95 percent or 90 percent. It's saying don't think of it as an exact number. Think of it as a number that falls between basically 4.158 and 4.164.
Q And then the next column that's SE, what does that refer to?
A That's the margin of error.
Q All right. How is the margin of error then distinguished from --

A I can't give you a precise definition of that. That is the number -- the margin of error and the standard error are two numbers that are associated with the number to the left, 4,160,993, and statisticians use that to calculate the total low and the total high.
Q And there is also a margin of error and standard error given for the Hispanic estimate as well, correct?
A Correct.
Q Do you know whether there were similar error calculations that were given for the 3 percent number that was given in your Table 1 for citizen voting age population for Hispanic in Wisconsin in 2010?
A Yes. There are corresponding margins of error.
Q And where are those set forth?
A I have not included those here although they do exist. What I'm showing in Table 1 is 3.0 is the best estimate of what the number is. I would say the margin of error is going to be -- based on the 2006-2010 ACS it's probably going to be somewhere in the range of -- it could be plus or minus 0.2 percentage points, something like that, but I've not done the calculation or shown the number.

Q And then I notice below in the table just down from the 2.73 percent figure there's a Range of Possible Value Analysis.
A Correct.
Q What does that set forth?
A What that is saying in plain English is -- the 2.73 percent that you see there, think of it as a percentage that it could well be somewhere between 2.68 and 2.78. So you might want to think of it as rounding it and saying it's somewhere around 2.7 to 2.8 percent. That would be the way you would think about that number in terms of how precisely you know it. It's as though you said a candidate looks like he has 53 percent of the popular support plus or minus two percentage points. It's that type of a statement to allow the public to judge it's plus or minus this much and not plus or minus ten times as much.
Q Again, it's a range that's going to factor in the margin of error and the standard error; is that correct?
A That's correct.
Q All right. If you would look at the next page then which is 2006-2010 ACS for Milwaukee County.
A Yes.

Q Do you see that? All right. Is this an analysis that you used in formulating your opinions?
A Not this particular table, no.
Q What was the purpose of creating this particular table?
A I believe this again was created in conjunction with creating the identical table for each census tract, and I simply printed it off to see what the number looked like based on the five-year ACS. As you will see if you do the same exercise, the lower right-hand corner is 6.76 for Milwaukee County over that five-year period. And if you look at my Table 1 of my report, you will see that the percentage shown for Milwaukee County was 7.6 as of 2010. So what the table that you're looking at, the five-year ACS table, is saying is during this five-year period Hispanics constituted 6.76 percent of the citizen voting age population. And if you want to know what that corresponding percent was as of 2010, the ACS point estimate is 7.6 percent as shown in my Table 1.
Q Again, if you had five years of data from the ACS, why didn't you use that ACS data? Why did you go with the single-year estimate for Milwaukee County?

A Because I wanted to line up the data, all of the data, in Table 1 to correspond to a single point in time which was 2010. I had the total population as of 2010 based on the census enumeration, I had the voting age population as of 2010, and then I felt that had I shown the citizen voting age population for the period 2006 to 2010 it would have been confusing and perhaps -- well, just confusing. Since I did have a measure for 2010, that single-year measure, 7.6 percent -- I knew what the percent was. It has a larger wider margin of error than the five-year ACS data, but, nonetheless, it lies where one would expect it to lie which is higher than it was during the five-year period; that is to say higher than 6.76.
Q So in Table 1 -- all of the data in Table 1 is single-year data either from the 2000 census or the 2010 census?
A That is correct.
Q None of the ACS data from multiple years is included in there. It's just the 2010 ACS data?
A That's correct.
Q Now, again, there are margins of error and standard errors associated with the 2006-2010 ACS data, correct?

A Correct.
Q Again, there is a range of possible values generated at the bottom of that page?
A That's correct.
Q And that range is from of 6.56 percent to 6.96 percent, correct?
A That's correct.
Q The 7.6 percent figure that you included in the citizen voting age population for Hispanics in Milwaukee County in 2010 of 7.6 percent, would you expect that to have a higher margin of error than the ACS 2006-2010 ACS data?
A Yes. It would by definition.
Q You can turn to the next page then. The next page is a spreadsheet, ACS 2006 2010 Analysis.xls. Can you identify this document for me.
A I can tell you that it is ACS data, but I'm not sure which piece of geography it refers to. Whatever the piece of geography is, it's a place that has a total population of 136,000. I don't really -- this is a print off from a part of a spreadsheet, and it may just be an extraneous print off that I had in my files. I haven't written any identifier on this, so I don't know which piece of geography it refers to. I would

have to speculate.
Q I think that on Exhibit 49-A this looks to me like this data matches up. As a matter of fact it's got the same -- this may be the same spreadsheet. I think it is the same spreadsheet. It was just four pages before Exhibit 49-A was.
A Which is 49-A?
Q It's going to have the sticker on the right.
A Yes. Let me see if I can find that. Yes. It looks to me like --
Q Just another printout?
A A duplicate copy.
Q Got it. And then the next page is a printout of a document. At the bottom it says Hispanics Growing Share of Prospective Voters.xlsx. Can you tell me what this document is.
A This document looks like it was a printout of the spreadsheet that is shown in Table 1 of my report, Table 1 of my initial report, but at a point when I had not filled in the citizen voting age population for 2000. So it was an early version of that table with some cells of data still empty.
Q All right. Moving on to the next group of documents that you produced this morning. I've got a paper clipped group here that appear to be

printouts from the U.S. Census Bureau American Fact Finder?
A Correct.
Q Is it a website? Is it a service?
A Think of it as the retail front door to the Census Bureau. If you go in and say I would like to click my way through and come up with a screen that looks exactly like this page that you see here and then I would like to just push print. It has a specific identifier. The first page says P12H. That tells you the exact table and the exact table description, Sex by Age, Hispanic or Latino. The universe is everyone who was Hispanic or Latino. It tells you that it comes from the 2010 Census Summary File 1. At the bottom it will give you -- if it weren't blurred out slightly, it will give you the exact website address where I got that.
These are the raw data that I used to compute the numbers and proportion of the Hispanic population under 18 and 18 and older for in this case Milwaukee County.
Q All right. Where did you use these data in your calculations and in your report?
A That will most likely be reflected in my various

data tables. Wherever I have referred to the voting age population -- I'm not sure why I have under 18. Let me just take a look at this for a moment. Well, these would be the data on which I would have developed my calculations of the 18 and older population in Table 1. I'm not sure that I've shown the under 18 population per se. I've only shown the under 18 citizen population in Table 2. Essentially what I do sometimes is instead of adding up all of the age groups that are 18 and older I take the total population and subtract out the under 18 population and that leaves me with the 18 and older population. I think that's what I was doing here although I can see I was also calculating the 65 and over population and that would have been used in my mortality analysis. I don't know if that answers your question.
Q Well, it appears that we have got table numbers that are on each of these printouts, as you have identified before, and in the tables that are in your report you have references to specific Census Bureau American Fact Finder tables, correct?
A Yes.
Q So, for example, if we look at Table 1 in your

report, you identify under sources -- one of the sources that you have is Table P12H.
A Correct.
Q So Table P12H, which you have produced here, is one of the tables on which you relied to create your Table 1, correct?
A Correct.
Q Now, what number are you taking from Table P12H to calculate one of the figures that appears in Table 1 of your report?
A Okay. I'm taking to be specific -- the table we're talking about right now, the hard copy table that says Milwaukee County Hispanic 2010 in handwritten comments -- I'm using this table, P12H, for this piece of geography to calculate the voting age population, the Hispanic voting age population, and the total Hispanic population. So if you look at the very top row in the printout where it says 126,039 and then if you look at Table 1 of my report, you will see in the right-hand column second cell from the top the number 126,039. So this table, P12H, is the source of that 126,039 in Table 1.
Q And then I might as well just ask you this now then. In Table 1 just above the 126,039 is the

total population all ages in Milwaukee County for 2010. That number is 947,735, correct?
A Yes.
Q Where did you derive that number from?
A That would in all likelihood come from one of the other tables in the source, either QT-P1 or QT-PL.
Q So if we turn the page, I think we have Table QT-P1, correct?
A That's right.
Q And so that's where that number is from?
A Yes. And you can see that on the top left-hand cell, 947,735.
Q All right. So then it becomes, looking at Table 1 in your report, the percent of Hispanic in Milwaukee County in 2010 is the simple calculation of dividing 126,039 into 947,735, correct?
A Dividing the 126,039 by the number 947,735, yes. That gives you 13.3 percent.
Q Then below that you have got the voting age population for Hispanics, correct?
A Correct.
Q And where do you get the 711,358 number from?
A If you go to that table, QT-P1 and if you go down to about the sixth row or so from the bottom where it says 18 And Over, you see the number 711,358.

It's on the left side.
Q The left side.
A The left side about the sixth line from the bottom or so.
Q I see. 18 years and older.
A 711,358. That's the number that appears in my Table 1 on the right-hand side about in the middle, the voting age population.
Q And then the number for Hispanics under that, 77,116?
A That is going to come from the calculations on the preceding page you were looking at, P12H.
Q And how did you come up with that?
A That would have been subtracting -- my recollection would be subtracting the under 18 population from the total population where you see I've done a calculation, the handwritten notes under 18 equals and then there's an arrow plus another arrow.
Q Okay. So you added up -- in other words, in Table P12H you added up the -- it looks like you have got a box around both for males and females separately, the ages under five years and then up to 15 to 17 years, correct?
A Correct.

Q So you added those up to get the under 18 population?
A Correct.
Q And then you subtracted that out from the total population?
A Correct.
Q I understand. Again, that percentage that comes out of that is simple math that you went through just a minute ago?
A That's correct.
Q Then underneath is the CVAP, the citizen voting age population, and where did those numbers come from?
A Now, that would be coming from the ACS, the American Community Survey, the one-year file, the 2010. If you look at the source of Table 1, it says American Community Survey Tables B05003 and B05003I.
Q Were those tables ones that we have already looked at? Were those included in here? I know it might have been a while ago.
A I don't know if they're in here or not. If I printed them out, they're in here. It may be that I simply used that as the citation of where I pulled them up on the screen. Let me just take a

look and see if I can find them in here. Yes. In that stack of papers you're looking at if you leaf ahead -- I'm just going to count the number of pages. This the set of pages that are paper clipped.
Q That start out with Table P12H?
A Yes.
Q Okay.
A If you go to the 14th page in that stack --
Q All right.
A And you see here it says --
MR. EARLE: There was printing on both sides. Can we make sure we're on the same page. This is the one dated 10:46 p.m. in the upper right-hand corner?
THE WITNESS: Yes.
Q It's B05003, Sex by Age by Citizenship Status, correct?
A Correct. I just have to double-check this, but that is the table from which I would have obtained the total population by citizenship and that would correspond to the Table 1, the row that's entitled Citizen Voting Age Population, CVAP, for Milwaukee County. Part of this has gotten clipped off, but you can see that I've got -- in the center of that

page on the right-hand side a handwritten number 670,1. That corresponds to the 670,124 in Table 1.
Q And how is that number calculated?
A That would be calculated as taking the total voting age population in the census table and subtracting out the two rows that say not a U.S. Citizen that are circled. Again, if you look at the arrows, you will see that the arrows combine 18 and over male and female and then there's two more that are circled with an arrow picking up from the left-hand side and they pick up the not a U.S. citizen part of male and female. So there's a little calculation road map there that says if you take the VAP, 712,692, minus the two numbers that I had circled, 22,624 and 19,943, you end up with subtracting out the non-citizens 42,567.
Q Where does the 712,692 number come from?
A That is a combination -- you see the arrow pointing to the word VAP?
Q Yes.
A Go to the left of that arrow and you see where it branches out? It combines those two numbers that are circled, 338,398 and at the bottom 374,294.
Q But in your Table 1 there's a VAP of 711,358,

correct?
A Yes. That VAP is based on the census full count. This is what the 2010 American Community Survey estimates the VAP at, 712,692. That's an example of how the American Community Survey will give you an estimate of the number but it won't be precisely the number because it's only based on a sample. So if you said I see two versions here of the VAP, one of them is 712,692 and the other one you have shown in your table is 711,358, the 711,358 is from the full census. The 712,692 is what you get if you asked the American Community Survey what would be your estimate of the VAP if you didn't know it from the census.
Q Okay.
A And the reason I calculated there is because this table, B05003, gives me not only the VAP but it also gives me the non-citizen component of the VAP. It is the only table that gives me that information, so it is the only way I can subtract out the non-citizen part and get the best estimate of the citizen voting age population in Table 1 which I've shown as 670,124.
Q And then the Hispanics, the 50,738 -- I know we have seen that number before.

A Yes. If you move on to the next table, B05003I, the next one in the sequence, you will see the same calculations but just for the Hispanics.
Q Now, with both of these, both in Table B05003 and B05003I, there's a margin of error that's given there as well, correct?
A Correct.
Q So, for example, in the looking at B05003 for not a U.S. citizen under -- it looks like it's Male 18 Years and Older Not a U.S. Citizen. It's plus or minus 2,092 and a total estimate of 22,624, correct?
A Correct.
Q So there are margins of error that are included in there?
A That's correct. The margins of error are shown.
Q So is there a total margin of error that you have calculated for your estimate of the citizen voting age population in Milwaukee County in 2010?
A No.
Q So the 50,738 number is calculated using the ACS one-year estimate, correct?
A Correct. Correct.
Q All right. Now, how did you come up with the percentage of Hispanic there, the 7.6 percent?

A It should be simple division, 50,738 divided by 670,124.
Q So that's when we were talking about before the five years of ACS data versus the one year of ACS data. That 7.6 number -- that's the one-year estimate for the ACS data, correct?
A That's the most current estimate that we have and it refers to the year 2010.
Q Would it be possible to calculate a margin of error for your 7.6 percent figure?
A I know there's a way to do it, but I didn't go to the trouble of doing it because I'm only interested here in getting the best point estimate and I'm cognizant of the fact that it has a margin of error. It could be higher. It could be lower. But by how much I have not calculated.
Q As far as you know these numbers are all correct? Actually, generally in your report -- have you gone back over and looked over your report to see if you can identify any errors in the data?
A Yes. I always go over anything I do and not only proof it but I double-check my calculations. My position on Table 1 is that all of these data for 2010 are the best officially available data on the matter shown; that is to say for the percent

Hispanic among the citizen voting age population the scientifically most defensible estimate is 7.6 percent as of 2010.
Q And generally in your report as a whole when you went back through it and checked on everything was there anything that you could identify that you needed to correct that was wrong in some way?
A I think there were just one or two typos. There is one thing I was going to go through and make a correction for the record. If you go to Page 10 of my December 14th report, there is a Footnote No. 3 at the bottom.
Q Yes.
A On the second from the bottom line where it says 2010 Block.
Q Yes.
A That should read 2000 Block.
Q All right.
A And then two lines above where in the center of that it says if the 2010 Block.
Q Yes.
A That should read 2000 Block.
Q All right.
A Those are the only two corrections I think I came across.

Q Do those two corrections change any of your analysis or conclusions in any way?
A No. They were simply typos.
Q Turning back to Table 1, your column Milwaukee County 2000, you do not have estimates for Hispanic or percentage Hispanics in the citizen voting age population, correct?
A That's correct.
Q And why is that?
A At that point in time I had not done the calculations that would be necessary using the 2010 census data. I had not anticipated needing to do so. It turned out subsequently that it was necessary to do so.
Q And so did you end up calculating those?
A Yes, I did.
Q And are those calculations reflected anywhere in the documents that you have produced here?
A They should be. I'm not sure exactly where. Would you like me to look for those now or keep things as they come?
Q Why don't we take them as they come. I need to make a notation here to myself.
A All right. I will represent that I did do the calculations quite recently and I know that

they're in here somewhere.
Q All right. So if we go down in the Milwaukee County, the 2000 column --
A Yes.
Q And this is in Table 1 of your report.
A All right.
Q Is the methodology that you followed to calculate the numbers that are in the column for 2000 the same as the methodology that you followed for 2010?
A Yes. It's the same procedure using the same publicly available tables from American Fact Finder except from the 2010 census.
Q Are those tables printed out in part of the materials that you have produced today?
A Yes. I believe if you keep leafing forward you will eventually see -- after you go through the tables that are labeled 2006-201 ACS, go ahead. I don't know if it's maybe four or five or six more pages. You will come to a table that says Milwaukee 2000 Total Pop in handwriting at the top.
Q Yes. I see that.
A At that point you're going to get into a series of tables that have essentially the same types of

calculations based on tables that have pretty much the same types of labels but from the 2000 census.
Q Okay. I'm sorry. I didn't mean to cut you off.
A And things are circled with the arrows showing what pieces go where.
Q Right. And then for the column in Table 1 that's labeled Wisconsin, how did you come up with your numbers for -- let's start out with 2000. How did you come up with the numbers that are in that column?
A I would have done it the same way with the same tables except it would have been for a different geographic area. In other words, if you look at, for example, the Table QT-P1 or QT-P whatever, you will notice that it will describe a generic type of table and then it will say geographic area. Some tables will say Milwaukee County, Wisconsin. Others would say Wisconsin. So it should have the same format. I'm not sure where they are in the stack of tables here, but there should be tables.
Q I think this is the -- let me just count here. If we count six sheets in, I see a table QT-P1 2010 Census Summary File 1 Geography: Wisconsin. That's where you would have taken that total number for 2010 of 5,686,986 that appears in your

Table 1?
MS. LAZAR: You didn't start with the right pile. Put a stack over.
THE WITNESS: I have to start at the beginning here.
MS. LAZAR: This page is the first page. Count six from that.
THE WITNESS: Okay.
MS. LAZAR: That was all paper clipped together, so start six from that.
A Yes. I see a table that is entitled QT-P1, and then it says Geography: Wisconsin. Is that the one you're referring to?
Q Yes, it is.
A And it has in the upper right-hand corner Age Tables Wisconsin Total Pop 2010.
Q And then for the population of Hispanics that's 336,056, does that come from the preceding page which is P12H, Sex by Age Hispanic or Latino?
A Yes.
Q Again, we can do the simple calculations, 336,056 divided by the denominator of 5,686,986?
A Say that again.
Q Sure. To arrive at the 5.9 percent Hispanic population in Wisconsin for 2010?

A Yes.
Q Again, that's just simple division?
A 336,056 divided by 5,686,986. Yes.
Q Okay. Then moving down to the next row, which is the Voting Age Population, did you perform a calculation to determine that similar to what you did for Milwaukee County?
A I did. I believe that you will see that on the next page where we have the population.
Q I see. There's a row for 18 years and older?
A Right.
Q And that's where you get the 434,794?
A Right.
Q And then the number of Hispanics you go back to Table P12H.
A That's correct.
Q All right. And you derive it from that. And then the CVAP -- again, you're deriving that from these two tables as well?
A No. At that point I believe what I had was a -- are you referring to the CVAP for 2010 or for 2000?
Q For 2010 for Wisconsin.
A 2010 would be from the 2010 American Community Survey, and there should be a table corresponding

to Wisconsin that would look exactly like the one for Milwaukee County in here somewhere. That's probably going to go back in the ACS series of tables. It's further back.
MS. LAZAR: Paper clip that together.
A This would have been a table of one-year ACS data. I've kind of lost track of where we had those tables. Let me just look at this.
Q I see one here that's B05003.
A That should be it.
Q Sex by Age by Citizenship Status.
A Does it say for Wisconsin?
Q It does. It says for Wisconsin. So there is a citizen voting -- it looks like you have got again two rows circled. One is 18 years and over for males, and then one is 18 years and over for females. It looks like you have circled both of those and I believe added those two up?
A Could you hold up the page you're looking at because I think I found it?
Q Of course.
A We're close. Hold on. We're very close. You have got the total population. I've got your page. And then the one immediately after that it

will say Wisconsin Hispanic. Do you have that in the next one in order?
Q Yes. So these two pages together are how you derived the citizen voting age population of Hispanic and then percent Hispanic.
A That's correct.
Q Now, you have got on the Table B05003 the Wisconsin totals. You have some handwriting on there and you say, "Striking disparity." What do you mean by that?
A I was referring there to the disparity between the Hispanic share of the under 18 citizen population and the total citizen voting age population, and I was struck by how much higher the Hispanic share was among those juveniles who would be aging into the voting ages in the future.
Q All right. Again, in the ACS data there are margins of errors that are associated with those numbers, correct?
A Correct.
Q And you have not calculated a margin of error for your CVAP percentage Hispanic, correct?
A No, I have not.
Q The remaining printouts from the American Fact Finder database or service that are in this stack

of documents, are those used elsewhere in your analysis?
A I don't believe they would be used anywhere else other than -- these would be the basic source data for the information in Table 2 for the two left-hand columns, Wisconsin and Milwaukee County. Actually, hold on just a moment here. That's the only place I think they're used, the only other place.
Q All right. If I look at Table 2 and Table 1, it looks like in Table 2 your numbers for Total Population All Ages for Wisconsin and then Hispanics and then Percent Hispanic -- that's essentially the same as in Table 1, correct, for the year 2010?
A Yes. Except that in Table 2 I've shown it to two decimal places instead of one for the percent Hispanic.
Q Right. And similarly for Milwaukee County in Table 2 it looks like the Total Population and the number of Hispanics and the percent Hispanic are the same as in Table 1 for Milwaukee County 2010, correct?
A Correct.
Q So you basically just carried the numbers over

from Table 1 essentially?
A That's correct.
Q Now, the CVAP numbers are a little bit different in your Table 2 than in Table 1 for -- maybe I misspoke there. I'm flipping back and forth between the two. No. Those are the same, right? So the CVAP for Wisconsin in Table 2 is the same as your CVAP for Wisconsin 2010 in Table 1, correct?
A That is correct. As far as I can tell the numbers, the CVAP numbers, are the same for Wisconsin and for Milwaukee County. You will see that reflected in the title of Table 2 that says Wisconsin and Milwaukee County 2010. That was my way of signalling that it was based on the one-year most recent ACS.
Q Right.
A And then the rest of the title suggests that Assembly Districts 8 and 9 had to be based on the five-year file.
Q And then just to go over the remaining cells here that are in Table 2. For the Citizen Population Under 18 in Table 2 in the column for Wisconsin you have 1,319,439. Where does that number come from?

A That would be -- let me see.
Q Is that a straight subtraction?
A I don't think so. It doesn't appear to be. I think that would be taken off of the one-year ACS data tables that I had used that we referred to earlier, the ones that were the ACS 2010 tables where I calculated the citizen voting age population. And it appears that what I did was calculate the under 18 population by aggregating the numbers under 18. The problem with subtracting; that is to say if you took Table 2 and subtracting total population at the top, that is the 5,686,986 -- that's based on the census. You go down to the Citizen Population 18 and Over. That's based on the ACS. So that's not going to be a precise number. So if you subtract the citizen 18 and over population from the ACS from the total population from the census, you're going to end up with what's called a mongrel number under 18 and it's best to simply go down and compute the under age 18 directly from the ACS numbers that are shown.
Q You would be mixing two different data sets?
A Yes. You would be in a sense subtracting an orange from an apple and ending up with a fruit

you didn't have a name for.
Q All right.
A If that makes any sense.
Q So the 1,319,439 number comes from the ACS 2010 table.
A That's my recollection, yes.
Q And then the number of Hispanics? Do you recall where that number comes from?
A That would be the same source of data, the ACS citizen population 18 and over and under 18 from one of the ACS tables that was just for Hispanics. I think there's one in the deck there that we looked at.
Q And then the percentage that you have there of Hispanics, that's just again a straight calculation?
A It should be, yes.
Q All right. Moving over under the column for Milwaukee County then, Citizen Population Under Age 18. Again, are these numbers that come from the ACS data?
A Yes. The Milwaukee County column would be sourced from the exact same data tables as the Wisconsin data except that it would be for a different geography.

Q Now, moving to the columns for Assembly District 8 and Assembly District 9, I think we talked a little bit about these before. You had testified earlier I believe that the total population numbers for Assembly District 8 and 9 -- those were in the table that came from Mr. Handrick?
A Yes.
Q And then we walked through before your calculations of the other numbers I believe.
A Yes.
Q Let me see if I can find the printout of the Act 43 demographics spreadsheet. That's back a few pages. If you go back a few -- you have got it in front of you. I think I'm getting this. In your Table 2 if we look at the column Assembly District 8 and we see the number 57,246 --
A Yes.
Q If we look in the Act 43 Demographics.xls spreadsheet, that's just a straight number that comes right from the number for District 8, correct?
A Yes. And that spreadsheet, the Act 43 spreadsheet that you're referring to, that is the source of the data in the two right-hand cells of my Table 2.

Q Yes. So what I'm doing is taking a look and just matching those up. In the Act 43 demographics spreadsheet we see District 8. There's a population of 57,246, and that's what you show in your Table 2 as the total population of Assembly District 8, correct?
A Correct.
Q So on the spreadsheet if we go down one row to District 9, we see the population is 57,233, and that is a number that goes straight into your Table 2 under Assembly District 9, correct?
A Correct.
Q Then on the spreadsheet if we go over to the row that says Hispanic, it looks like there is a number on the spreadsheet of 37,750 for District 8, correct?
A Correct.
Q And that just went right in your Table 2?
A Correct.
Q And similarly for District 9 there is a number of Hispanics, 34,647, and that goes right into your Table 2, correct?
A Correct.
Q And then the percentages -- it looks like percentages of Hispanic are drawn right from the

spreadsheet as well, correct?
A Either that or I did the calculation independently.
Q So if you go -- fair enough. There is a Hispanic percentage that is identified in the demographic spreadsheet, correct?
A Yes. And they're equal.
Q The numbers are the same. So regardless of whether you calculated it or it's in the spreadsheet, that's what it is, correct?
A Correct.
Q And then the CVAP, we had gone over that before, and that was from the ACS data, correct?
A For Assembly District 8 and 9, yes.
Q Thank you for the clarification. For Assembly Districts 8 and 9. And then the citizen population under age 18? Where did those calculations come from?
A That would come from the same data that I put together based on the ACS. In other words, I got the citizen population and I distinguished the 18 and over from the under 18.
Q Okay.
A That would be the source of the citizen population under age 18, the ACS 2006 to 2010.

Q Now, I note that in among the other materials that you have produced are reports prepared by John Diez of Magellan Strategies and Keith Gaddie and also a declaration of Bernard Grofman, correct?
A Yes.
Q Did you have any input into those reports? Were you asked to review them at all and comment?
A I don't have any recollection of reviewing these or being requested to comment on them until after they were filed. I was not requested to make any comment on them, and I don't recall reviewing them until after they were filed.
Q Did you speak with Mr. Diez or Professor Gaddie or Mr. Grofman before, Professor Grofman, before they prepared their reports?
A I don't have any recollection of talking to any of them except talking to Professor Gaddie at some earlier point but I believe I spoke to him in the context of another case that the two of us were involved in, and I think it preceded this case. I can't say for sure that I had no conversation with him whatsoever. I know that I had no conversation with him about his report. If my conversation that I'm thinking of was about this case, it

wasn't about his report. I think I was just trying to find out what this case was about. I think that was the topic.
Q It looks like there is one other spreadsheet that we haven't gone over. This is in the materials that you produced. This is a document that says at the top Age Standardized Participation Milwaukee County 2010.xls.
A Right.
Q It's right toward the end of the clipped materials right there.
A The paper clipped?
Q The binder clipped.
A Binder clipped. All right. Yes.
Q Can you identify this document for me.
A Yes. This is the age standardization that I performed very recently which I mentioned. This is after I filed my rebuttal report.
Q Yes.
A I performed it just to establish the procedure and my earlier conclusion, to document my earlier conclusion, that the crude registration rates that were used by Professor Mayer in making his comparison of Hispanics and non-Hispanics set up a comparison that was totally uninformative because

he had failed to standardize on citizenship and also age structure. After I had made that critique of his approach, I decided to perform the age standardization on the most recent election, which was 2010, and show just how much of a difference age standardization made. So I performed this analysis.
Q All right. Just take me through this here, what you have done. On the first page I see there's a 2010 population for Milwaukee County, correct?
A Correct.
Q And it's broken out by some age ranges.
A Correct.
Q And these data are taken from the 2010 census?
A These would be from the 2010 census. I cannot tell you -- let me just think for a moment. Yes. These are from the 2010 census. They are broad age categories that you see here, 18 to 24 and 25 to 44 and so forth.
Q Why are they broken out into those particular age ranges?
A I put them together in those age ranges so that they correspond with the registration rates that are shown in the Census Bureau's current population survey on the next page.

Q So on Page 1 where we see the age range of 18 to 24 we see Hispanics 15,384. Where does that number come from?
A That would come from Census 2010 Summary File 1 or table -- yes. Summary File 1 Table P12H.
Q Which is one of the tables we were just looking at?
A I believe so, yes.
Q And then for non-Hispanics you have got 92,893, correct?
A Yes.
Q And where are those data taken from?
A That would be subtracting Hispanics from the total population; that is to say the Hispanic population from P12H and subtracting that from the corresponding age ranges for the total population from Table SF 1 to get the non-Hispanic population.
Q All right. Now, the total population does not appear in this printout of the spreadsheet.
A Correct.
Q Is that because it's not sufficiently wide to be able to print it?
A No. I don't believe I entered the total population here. I think I had derived the

Hispanic and non-Hispanic population in another table so I simply entered it in. One could just as easily have entered into the Total Population column, the Hispanic Population column, and then gotten the non-Hispanic by subtraction.
Q And then if we move over to the next column to the right it says Relative DIST'N.
A Yes.
Q What does that indicate?
A That is the relative distribution of the Hispanic population and the non-Hispanic population on a percentage basis. So what that table does is it simply calculates from the left-hand table, where I have the numbers -- it calculates that Hispanics 18 to 24 constitute 19.67 percent of the total voting age population, non-Hispanics constitute 14.65 percent and so on. Hispanics constitute 51.89 percent of the population 18 to 24, voting age population 18 to 24 -- sorry. 25 to 44. And the noteworthy point is that when you get up into the 45 to 64, 65 to 74 and the 75 and older age ranges you will note that there is a disproportionate concentration of non-Hispanics in the older age groups. In fact, that's true of all of the age groups above 24. This part of the

table allows us to discern the differential age structure of the Hispanic and non-Hispanic voting age population.
Q But, again, it doesn't necessarily link directly to mortality. There could be other reasons for that disparity; isn't that true?
A There are all sorts of reasons, but it is the reality of what is out there now for whatever combination of reasons. Hispanics are disproportionately youthful. Non-Hispanics are disproportionately mature.
Q Now, if we turn the page, in the first or over on the left-hand side of the page we see Percent of Population Registered to Vote in 2010; is that correct?
A Correct.
Q And you say that the source of that is the current population survey, November 2010 Table 2, right?
A Correct.
Q Is that census data as well?
A Well, it comes from the Census Bureau. It's based on the Census Bureau's current population survey. I should say that I think -- I'm not sure if it is exclusively from Table 2. Table 2 I know shows the Hispanic population. I'm not sure if it shows

both the Hispanic and the non-Hispanic or if it shows the Hispanic and the total, but there is in that -- in that part of the current population survey -- it may be Table 1 or Table 3 that would show the other component. But it is from the November 2010 current population survey, and the column Hispanic that you see there is the percent of the population that is registered to vote by age.
Q Now, that's throughout the United States, correct?
A Correct.
Q Is there any data that are available for Milwaukee County specifically?
A Not with this degree of detail, no.
Q Turning back to Page 1 where you have got the distribution on a percentage basis. Those are just calculations that you made from the data over -- strike that question. Are these calculations you performed in the distribution specific to Milwaukee County?
A No. The right-hand part of the first page, which says Relative Distribution, is based exclusively on the left-hand half of the table which is marked 2010 Population Number.
Q Right.

A I'm sorry. I see where the confusion is. I put down here the area is Milwaukee County and the population refers -- the population here is for Milwaukee County. The first page is for Milwaukee County.
Q Okay.
A Sorry.
Q That's all right. It is getting late in the day. It's hard always to follow each other. Turning to Page 2, you have got -- the right side of the page says Percentage of Population Turning Out to Vote 2010 U.S., and there are no numbers given.
A Just the percentages. In other words, it's what it says in the title. 34.5 -- I'm sorry. On the right-hand side.
Q Right-hand side. Yes.
A No. I did not fill that in because I was not addressing turnout. I was only addressing registration. That was the only point that was made in Professor Mayer's report.
Q All right. And then if we turn to Page 3, on the left-hand side of the page there is a section that's labeled Each Population Registered in Hispanic Rates. Have I read that correctly?
A Correct.

Q What does this portion of the table show?
A This is a hypothetical that basically says what would the total standardized registration rate, which is the row at the bottom, be if the populations had identical age structures. In other words, they registered at the -- I'm sorry. I take that back. What would the registration total standardized registration rate look like if each population with its different age structure registered at the rate that one or another group registered. So if you imagine -- we already observed Hispanics, the Hispanic population, with its youthful age structure registering at the rate that Hispanic do. What would happen if the non-Hispanic population with its more mature concentration in the more mature ages registered at the same rate that Hispanics do age by age. That's what you see on the left-hand half of the table. On the right-hand half the question is what would the total standardized registration rates be if the youthful Hispanic population were to register at the rates that non-Hispanics are observed to register age by age. So you can simulate either world, whichever one you want. But for my purposes the conclusion that it

supports is by comparing the observed difference on Page 2 between 51.6 total and 66.6 total, which is roughly exactly a 15 percentage point differential, and noticing that if one standardized on age the differential shrinks to approximately four percentage points or three percentage points, three to four percentage points -- three percentage points basically between 50.6 and 53.6 or between 62.6 and 65.6. So the actual difference, which is a 15 percentage point difference between Hispanic and non-Hispanic registration -- one can say that somewhere around a quarter or a fifth or I should say three-quarters of four-fifths of the difference that one observes is simply due to the different age structures of the population, not to a dramatic -- and is therefore not a dramatic differential as Professor Mayer makes it out to be.
Q All right. This was to rebut the points that Dr. Mayer had made in his expert report?
A It was simply to try to quantify how important age standardization was, and in this case it is of overwhelming importance and renders his conclusion regarding the differential between Hispanic and

non-Hispanic registration meaningless to me for reasons I set forth in my rebuttal report.
Q And then finally the last page or Page 4 of this age standardized participation spreadsheet pertains solely to voting and you didn't look at voting?
A I did not look at voting, but the spreadsheet is there. In the event that one wants to pursue that question, one would put in the numbers and be able to answer the questions in the same way based on the percentage of registrants who turned out again adjusting, standardizing for age differences.
Q You can put that document to the side. The very last document that you produced or brought with you here today was a December 14th letter to Mr. Hodan attaching an invoice, correct?
A Correct.
Q All right. Did you have any kind of an engagement agreement or retention letter for your work in this case?
A I think I have an E-mail that basically said this E-mail is to inform you that we want to retain you. It was the barest bones of E-mail retention letter, but it sufficed for my purposes.
Q Do you know if that's something that's in here,

the documents?
A It should be. I know I E-mailed it to Mr. Hodan and said here is one of the E-mails.
Q Do you know the timing when you were retained?
A It probably would have been late November, early December.
Q I don't see anything in here. Perhaps it's somewhere.
MR. EARLE: I've seen it in here.
MR. POLAND: You saw it on the thumb drive?
MR. EARLE: Yes.
MR. POLAND: Mr Earle believes that he saw it on the thumb drive.
Q To the best of your recollection it was sometime in late November?
A Somewhere. I don't really recall when it was. It would be in the fall. That would be my surest answer.
Q So it was Mr. Hodan who retained you; is that correct?
A That's my recollection.
Q That E-mail from Mr. Hodan with the engagement letter, was that the first time that you had had any communications with anybody about working as

an expert in this case?
A. Yes.
Q. What were you asked to do when Mr. Hodan contacted you initially?
A. I don't have a clear recollection other than I think it was vaguely worded we need to have a demographic analysis of the Hispanic population in Wisconsin and in Milwaukee and in the Milwaukee area and especially in two assembly districts. That was to me a vague kind of statement, but I knew more or less what it involved and I knew it meant several levels of geography and it meant several points in time. I believe there was some mention of the citizen voting age population to which I'm sure I would have said that will require using the American Community Survey which immediately makes it more than a trivial task.
Q. Did Mr. Hodan give any materials to you when he first contacted you?
A. I think I may have asked him for the complaint. My usual practice is to say would you please E-mail me the complaint so I know what the case is about and then I'll look it over and I'll let you know if my expertise fits with your needs.
MR. KELLY: Doug, just so we're all

clear on where you're going, my understanding is that the areas of inquiry where you can go in deposing an expert witness is to look for assumptions that he's been provided and the data that he's been provided in terms of retention and that beyond that inquiries into his conversations with counsel are not discoverable.
MR. POLAND: I would completely disagree. What's not discoverable under Rule 26 are draft expert reports, and that was just codified into the rule this year. Otherwise anything and everything -- for a testifying expert it is very different than consulting experts.
MR. EARLE: I would add that I have never heard such a rule either in all of my years of practice.
MR. KELLY: Well, it's new, so all of your years of practice wouldn't cover it.
MR. POLAND: Well, all that is new is it's just with respect to draft reports. So draft reports and communications about draft reports are not discoverable. Those are carved out. That is the new rule. But

otherwise communications and --
MR. EARLE: It doesn't apply to reliance material and material requested. It's reliance material.
MR. KELLY: Reliance material is fine.
MR. EARLE: Communication with counsel regarding the retention?
MR. POLAND: Sure. All that stuff is fair game.
MR. KELLY: With respect to reliance material?
MR. POLAND: With respect to anything other than draft reports. Draft reports is the only thing that's carved out under the new rule.
MS. LAZAR: We will see where you go.
MR. POLAND: That's fine. You can pull out a rule book and take a look. It's right in the text. It's pretty easy.
MR. KELLY: I know the rule.
Q. Are all of the materials that you have received from Mr. Hodan or Ms. Lazar or Mr. Kelly or anyone working with them in this lawsuit reflected in the

materials either that you have produced today or that Mr. Kelly attached in his December 28th letter to me which is Exhibit 52 to the best of your knowledge?
A. To the best of my knowledge everything is in those two components that you have.
MS. LAZAR: My apologies. Did you mention the thumb drive?
Q. And the thumb drive too which has been marked as Exhibit 50?
A. Correct. That is what I was including in my statement.
Q. So there is nothing that you relied on or considered that hasn't either already been produced, or, in the case of materials like commonly available journal articles and things like that that you have cited you have identified them. You haven't produced actual copies which is fine, but you have identified them. There's nothing that you haven't produced to us or made available to us?
A. You are correct, yes.
Q. Who have you spoken with in any capacity in connection with your work in this case?
A. I have spoken with I think my GIS person who I

asked to I guess somehow draw a picture of what the districts looked like before I actually had a cleaner version of what the census tracts were. I've talked to my technical person who is a former Census Bureau employee about accessing the American Community Survey data. I think I spoke with one of my co-authors with whom I've authored many articles about the geographers' definition of an ethnic enclave because I wanted to assure myself that I was using the term properly. I think that's -- I don't think I've spoken with anybody else other than my wife.

Q The GIS person and the person that you described as your technical person, are those people that you either use as subcontractors or that are employed by you?

A They're not employed by me. They're people with whom I've worked, and I occasionally call on them to do a particular technical task. I don't do the GIS stuff because I have neither the equipment or the knowledge. It's a very specialized thing. But I know how GIS works. Typically when you get to something like the ACS data, you are better off if you're working with the advice of a technical person especially in my case being fortunate

enough to have a person who was a former Census Bureau employee who did this full-time, knows where the data are, what the limitations are, how to access them so I can work off of that person and usually I'll just delegate the task and say here is what I want. I want this kind of a table derived from the ACS 2010 or the 2006-2010 and I want to calculate the possible high level possible low level. I want to show the margins of error, et cetera. That's where I get that information from. It's not an easy task.

Q Are the two people that you mentioned, the GIS person and the technical person -- were they essentially working under and working at your supervision and direction?

A Absolutely, yes.

Q Were they exercising or making decisions based on their own independent judgment separate and apart from what you had discussed with them?

A No. Not at all. I tell them exactly what I want and I say I know it's there. Put it together this way and then show it to me and then I want to see that from my standpoint it all adds up to what it should add up to.

Q Is there any work that you're aware of that they

did in terms of calculations or what I'll call primary work that isn't reflected in your report or in the materials that you have produced today?

A None whatsoever, no.

Q Now, you mentioned co-authors also that you spoke to.

A Yes.

Q Who are the co-authors that you're referring to?

A I have in mind Professor William Clark at UCLA.

Q Anyone else?

A No. That's the only one.

Q I know that we're going to have to change a tape in just a minute here. Let me just ask you another question. I understand you spoke with those people. What other people have you spoken with? I would assume you have spoken with Mr. Hodan, correct?

A Yes.

Q All right. Did you speak with Mr. Kelly about your work?

A Not until yesterday.

Q That was the first time you had spoken with Mr. Kelly about your work in this case?

A I believe so, yes. I don't believe I had -- I don't recall having any contact with him

whatsoever except he may have been CC'd on some E-mails that were sent to me. That's where I first saw his name. I don't have any recollection of having any direct contact with him until yesterday.

Q What about Ms. Lazar? Have you spoken with Ms. Lazar?

A I met her for the first time yesterday too.

Q Any other lawyers that you have spoken with about your work in this case?

A Not that I can recall.

Q All right.

A No.

Q Have you spoken with Mr. Troupis about your work in this case?

A I don't know who he is.

Q All right. What about Mr. McLeod?

A Never heard of him.

Q Have you spoken with Joe Handrick about your work in this case?

A I haven't spoken with him. I simply sent him a one-way E-mail saying I need these data. Can you get them. In that sense he spoke back and said here they are.

Q And how did you know to contact Mr. Handrick?

A I believe I was either referred to him directly by Mr. Hodan or he passed on my request to this GIS person that they have.
Q When you say the GIS person that they have?
A The name you just mentioned. I forget. Kendrick was it?
Q Mr. Handrick?
A Handrick.
Q So you have never spoken with Mr. Handrick actually either in person or by phone?
A I think I spoke with him once by phone. Now that I think of it, I think there may have been a one time -- it was either a phone call or an E-mail where I said let me just tell you directly from the horse's mouth what I want. I don't want it to go through a lawyer who will communicate to you possibly miscommunicating exactly what I want because part of what I wanted was dependent on what he had. I said do you have the data classified this way. If you do, that's what I want. I said just send it to me however much detail there is by race and ethnicity. Whatever it is, I want to have it as fully detailed as are available and I realize that it may not meet all of my needs but whatever it is I want to see it.

MR. POLAND: We're going to have to stop there to change the tape.
(Recess)

EXAMINATION

By Mr. Earle:

Q Dr. Morrison, I'm going to jump around a little bit and ask some spotted questions. Hopefully that won't discombobulate this process.
Could you explain to me how you think that Dr. Mayer committed an error or was wrong in any way in his ecological inference analysis with regard to racially polarized voting.
A His analysis is based on flawed data.
Q Explain to me how it's flawed. Where is the flaw in the data?
A He has miss measured the Hispanic share of the registrants at the precinct level.
Q Now, as I understand your report, what you criticize is his use of Spanish surname data; is that correct?
A I pointed out that he used the wrong Spanish surname list.
Q And how does that affect his ecological inference analysis of racially polarized voting?

A It results in his having miss measured the Hispanic share of the registered voters at the precinct level.
Q How?
A Because he failed to detect all of the registrants who were Hispanic.
Q And it's your understanding that he went through and identified all of the registrants who are Hispanic erroneously? Is that what you're saying?
A He used the wrong list to identify them.
Q You use a list with 12,000 -- how many people? 12,497 Spanish surnames?
A That's correct.
Q And just so I understand, Dr. Mayer used a list of 639 surnames, correct?
A Correct.
Q Now, the incidence of these surnames varies statistically, correct?
A What do you mean the incidence?
Q The incidence of their usage in a given population.
A Yes. It does.
Q So you take a given population of a thousand people who are of Latin American national origin with Spanish surnames, the percentage of those

folks who have the name Hernandez is going to be larger than the percentage of those who have a rare Spanish surname, correct?
A Correct.
Q And for some of the rare Spanish surnames the statistical incidence rate in a given population is going to be infinitesimal; isn't that correct?
MR. KELLY: Objection, form.
Q You can answer the question.
A Some surnames under your hypothetical would be infinitesimally frequent, yes.
Q Frequent?
A Infrequent.
Q And as a person who has indicated, as you have, that you are familiar with the literature in this area, you're aware that you can actually acquire some data as to the incidence of these names, correct?
A I myself cannot acquire those data, but the Census Bureau uses those data to construct its surname list.
Q And you're not aware of any data that indicates that certain names are used more frequently than other names?
A I am aware of the data.

Q Did you make any effort to quantify what you think the consequence of Dr. Mayer using 639 names as opposed to 12,497 names would be?
A I have not yet done so. The only way to do so would be for me to obtain his raw data and correctly identify Spanish surname persons using the full Census Bureau list. I could then compare the data that he tabulated by precinct with the data that I would have tabulated by precinct, and that would allow me to assess the degree of error.
Q All right. In a population of 57,246, how consequential is it to use a list of 12,497 names as opposed to 639 names?
A How consequential would it be?
Q Yes.
A I think it would be consequential enough to be of concern if one were using the data for the purposes that he used them.
Q What's the range of impact?
A I could not estimate it unless I did the analysis that I just referred to.
Q So if Dr. Mayer erred in this regard, you don't know by how much he erred?
A I know that he erred. I don't have any knowledge as to how much of an error or how consequential

the error would be for his statistical analysis, but I'm confident that the error would make a difference.
Q But that last point is a critical point. You are not in a position to provide reliable sworn testimony to a reasonable degree of empirical certainty as to the degree of error Dr. Mayer's analysis if there is any.
A I am not in a position to say how large the error is but only to say that I believe his analysis is deeply flawed by having used the wrong surname list.
Q You're not in a position to say how consequential any error would be?
A Not yet.
Q Well, you have had plenty of time. You provided a rebuttal report in which you criticized this.
A I don't have his raw data, though. I would be happy to replicate this analysis if I were provided with the data that he used and that would settle the matter one way or the other before trial.
Q Now, once again, we're dealing with -- in the 8th assembly district we're dealing with 57,246 individuals, correct?

A I'll take your word for that, yes.
Q I'm reading it off of your chart, Table 2.
A Of my first report?
Q Yes. In that population how many people do you think have the name Palou, P-a-l-o-u?
A I have no idea.
Q Would you recognize the name Palou, P-a-l-o-u, as a Latino Spanish surname?
A I would have to look at the Census Bureau's list to see if that's on it. It sounds possible.
Q It sounds possible. All right. How about the name Biar, B-i-a-r? What do you suppose the incidence rate of the people with the name Biar is in a population of 57,246?
A I could only speculate. I have no idea.
Q Now, your database -- are you able to identify and figure out from that -- if that name, B-i-a-r, is on your list of 12,497 names, would you be able to figure out what the incidence rate is for that name?
A Not the incidence rate. I would be able to ascertain whether or not it was on the list.
Q If it were on the list, would you be able to figure out or tell us the statistical significance of having or not having that name on the list?

A I could state with confidence that if that name were on the Census Bureau's list of Spanish surnames the incidence was high enough for the Census Bureau to include it on the list as a surname that was capable of detecting persons of Hispanic origin.
Q What degree of probability?
A I don't know what that degree is, but I know it was one that equalled or exceeded the threshold that the Census Bureau used to establish its list for purposes of detecting persons of Hispanic origin.
Q What is that threshold?
A Pardon me?
Q What is the threshold?
A I don't have it on the top of my head, but it is documented in one of their research papers.
Q So would you agree with the idea that the size of the list of Spanish surnames needs to have some degree of relationship to the size of the population you're trying to assess?
A No. I would not agree with that.
Q Have you ever met a Spanish surnamed person with the name Lao, L-a-o?
MR. KELLY: Objection, form.

A I don't recall doing so, no.
Q Do you believe the name Lao, L-a-o, is a Spanish surname?
A I would have to check to see whether it's on the list of Spanish surnames.
MR. KELLY: Are we going to go through all 12,000 names?
MR. EARLE: No, we're not. I have a few examples I just wanted to get on the record.
Q How about the Spanish surname Nin, N-i-n?
MR. KELLY: Objection, form.
A I don't know whether it's on the list or not.
Q Well, I'll represent to you I read it on the list. Do you have any idea what the incidence rate is for Nin?
A Are you saying you found it on the list of 12,000 odd Spanish surnames?
Q Yes.
A Okay. Do I have any idea what the incidence is?
Q Right.
A The incidence is equal to or greater than the threshold that the Census Bureau used to establish the list for purposes of detecting persons of Spanish origin.

Q What is the outside range of inaccuracy that you anticipate Dr. Mayer could have as a result of having used the list of 639 Spanish surnames?
A I have no basis for speculating on that until I replicate his analysis with the correct list.
Q Now, on the second page of your rebuttal report --
MS. LAZAR: A note for the record. That's not in as an exhibit. If you would like it to be, we could do that. Otherwise you're asking him to see something that's not marked as an exhibit.
MR. POLAND: Let's mark it.
MS. LAZAR: It will be 53.
(Exhibit No. 53 marked for identification)
Q First of all, when I was reading the report, I came on -- at the very bottom Paragraph 8 there's a parenthesis. Dr. Mayer's abbreviated list of 639 most frequently occurring heavily Hispanic surnames comprises only 1/20th of this list. What is the significance of the fact that it's only 1/20th if it's the most heavily occurring names?
A 1/20th strikes me as a miniscule fraction. Even though it is very possibly the most heavily Hispanic 1/20th, it does leave out 19/20ths of the

names that were sufficiently heavily Hispanic for the Census Bureau to use them in its full list.
Q Again, proportionality means nothing to you in drawing your conclusions in this regard with regard to --
MS. LAZAR: Objection, argumentative.
MR. EARLE: Let me finish the question first. I'll take your objection in anticipation of my question so it's on the record.
Q So as far as you're concerned the incidence rate of frequently used names like Orosco, Hernandez, Rodriguez, names that you see over and over and over again -- that the incidence rates of those names as opposed to the rarely used names at the bottom of the Census Bureau's list of 12,000 -- that difference doesn't matter to you in your analysis?
MS. LAZAR: Objection. Assumes facts not in evidence that the 19/20th of the names are rarely used.
Subject to that you may answer.
MR. EARLE: Stop with the speaking objections.

A I didn't say what you just said. I didn't speak the words that you put in my mouth. I didn't say that.
Q Then fix it for me.
A I have no way of knowing how important or unimportant it is to leave out 19/20ths of the surnames that the Census Bureau carefully selected in order to detect the Hispanic population of the United States. My judgment professionally is that leaving out 19/20ths of the surnames that the Census Bureau intended to be used constitutes a serious problem.
Q Then I guess I want to just ask you some questions about Paragraph 14. I don't understand what you were trying to do in Paragraph 14. I noticed there was a chart in here as well somewhere. You say, "Suppose we have 1,000 voters in a precinct, of whom 100 are Spanish surnamed. The Census Bureau's exhaustive research into its list of 12,497 Spanish surnames provides the necessary parameters for a demographic estimate. Specifically, the number of Hispanic voters amongst these 1,000 voters consists of, A, the 86 of the 100 SSNs who are Hispanic plus, B, the 222 non-SSNs who are Hispanic for a total of 308

Hispanic voters among the 1,000 voters." Did I read that correctly?
A I believe you did, yes.
Q What are you trying to say there?
A What I'm saying is that there are false positives and false negatives. It's not what I'm trying to say. What I've said is that anyone who has read the Perkins 1993 article that is cited at the back of my report would be able to see that for this hypothetical illustration the fractions that one uses to compute false positives and false negatives would lead to these conclusions and that the simple equation of 10 percent Spanish surnamed equals 10 percent Hispanic is a serious error when in fact the best demographic estimate is 10 percent Spanish surname really means 31 percent Hispanic.
Q You're saying that that 31 percent of the people who have a Spanish surname are Hispanic?
A No.
Q What are you saying?
A I'm saying if 10 percent of the 1,000 voters in a given precinct have Spanish surnames, the best demographic estimate of the Hispanic share of those voters is 31 percent based on the parameters

for Wisconsin.
Q Let's go through that. I'm slow. You have taught classes. Perhaps you have taught a remedial class. Here is an opportunity to do it again.
A All right.
Q I didn't get what you just said.
A Okay. I've not taught any remedial classes, and I don't think that you fall into that category. Let me explain because it is a tricky calculation.
Q But I would suggest you approach this with patience.
A If you have 100 persons with Spanish surnames, the Perkins paper says that you can expect 86 of those Spanish surnamed persons to be persons who -- I should say he measured the percentage of persons with Spanish surnames who checked the Hispanic box on the census and found that 86 of those 100 were Hispanics. That leaves 14 people with Spanish surnames who did not check the box and that would be for example in the illustration I used the person who is Joan Smith who says my name is Joan Smith but I've recently married Mr. Gomez and so my name as a registered voter is Joan Gomez but I'm a person who did not check the Hispanic box. So even though I have the surname Gomez, I'm not

Hispanic. I did not check the box Hispanic on the census. That's an example of a false positive. We know that there is a false positive rate of 14 percent among people who have Spanish surnames. Have you got that concept?
Q Okay.
A All right. Now the converse is if you have 900 persons who have surnames that are not on the Spanish surname list, there may still be among them persons who have checked the Hispanic box on the census. The Perkins research shows that in this example that I've used you could expect 222 of those persons who do not have a Spanish surname to be people who had checked the Hispanic box on the census. That could be either persons who had a very rare Spanish surname that was not on the list --
Q Mr. Lao?
A If Lao is not on the list but Mr. Lao checked the Hispanic box, then that would be an example of a false negative.
Q Okay.
A And if, as I used in the illustration here --
Q Don't go to the next thing here. Let's stay there. Of those 900, 222 who have non-Spanish

surnames who you say are Hispanic or Latino --
A Who Perkins' research shows would be an estimate of the number who are in fact people who checked the Hispanic box.
Q So it is the 31 percent?
A It's the 222 plus the 86 that adds up to 308.
Q Which is 31 percent?
A 31 percent.
Q So where does the data come from? Where does Dr. Perkins get his data that indicates that on average 222 non-Spanish surname individuals out of a population of 900 who have no Spanish surnames are going to be Latino?
A The answer to your question -- the short answer is Mr. Perkins, who did this research as a Census Bureau employee for the Census Bureau using internal data sources that only he had access to, published the results. The long answer is where did he get the data from. It's set forth in his 1993 article at the end called Evaluating the Passel and Word Spanish Surname List. It's a technical working paper that the Census Bureau issued.
Q So from this we would assume that -- what percentage is 222 of 900?

That would be the false negative rate. I don't know what the percentage is offhand. It corresponds to a parameter that is shown in the Perkins paper for the State of Wisconsin.
Q And you would come to Milwaukee with a straight face and say that is reliable to calculate on that ratio the percentage of the Latino population of this city amongst those people who do not have Spanish surnames?
MR. KELLY: Objection, form.
A I would say it is the most reliable estimate of the Hispanic share of the registrants in a particular precinct where only 10 percent of the surnames were on the Spanish surname list.
Q Put aside the 10 percent Spanish surname component of this. We're focused on this idea that if you have a specific number of non-Spanish surnamed individuals, in this case 900 -- let's make it 9,000. Let's make it 90,000. All right? In Ozaukee County in the State of Wisconsin not one Spanish surname -- we would have 90,000 people with non-Spanish surname last names. You're going to tell me that that ratio will hold as to the Hispanic population in Ozaukee County?
A Not in a situation where you have only 900,000

persons not on the Spanish surname list and no persons with Spanish surnames. You have to understand the condition that I've imposed here is an election precinct in which 10 percent have Spanish surnames and 90 percent don't. If you say I have a precinct in which 0 percent have Spanish surnames and 100 percent do not, that would come out with a different number.
Q Let me approach this a little bit differently. I'm really struggling with this concept. The 8th assembly district as drawn by Act 43 in the southern census tracts north of Howard, the bottom boundary of the 8th assembly district -- some of those census tracts have 20, 30 percent, 10 percent Hispanic population according to the data.
A According to the census data or according to --
Q According to the census data.
A The Census 2010 tells us what percentage of the population is Hispanic.
Q It is what it is. Let's just say hypothetically -- I don't know this for a fact. I don't have the numbers in front of me. Let's say hypothetically one of those census tracts is 10 percent Hispanic, one of those census tracts is

20 percent Hispanic, and one of those census tracts is 30 percent Hispanic. I'm sure there's some in those ranges down there. Is it your testimony that based on your reliance on this Perkins article that in those census tracts the number of Hispanics is going to exceed the Spanish surnamed population?
A Yes, but by a diminishing amount as your hypothetical envisions a different makeup. So the 10 percent Spanish surnamed precinct compared to let's say the 30 percent Spanish surname precinct -- they are not going to go up at the same level in those two precincts because of the nature of the combination of 10/90 versus 30/70.
Q Okay. So where is the tipping point?
A I don't know where the tipping point is, and I'm not sure whether there is a tipping point. I know that the percentages will be more nearly equal at about 50 percent. So if you have 50 percent Spanish surname, the percent Hispanic, according to these parameters, will not be anywhere near as different than the difference that you see at the extremes of 10 percent that I've used in this example.
Q So in a census tract that is 50 percent Hispanic

according to Perkins it would be 100 percent Hispanic?
A No. That's exactly the opposite of what I'm saying. What I'm saying is if it was 50 percent Spanish surnamed, it might well be 53 percent Hispanic using the parameters that Perkins gives us.
Q But if it's 10 percent Hispanic, it's going to be 31 percent?
A Whatever I showed here. 31 percent. Yes. That's the best estimate for Wisconsin. It differs from state to state.
Q All right. Understood. Paragraph 19 --
MR. EARLE: I'm going to stop. Let's go off the record.
(Discussion off the record)

RE-EXAMINATION

By Mr. Poland:
Q Dr. Morrison, do you still have Exhibit 53 in front of you?
A I do.
Q I would just like to ask you a little bit more about Exhibit 53. We're going to go to Paragraph 8 which is the surname list that

Mr. Earle was asking you about previously. You identify the list that you use which is a list created by the U.S. Census Bureau in 1980, correct?
A Correct.
Q Now, you say in your rebuttal report that's composed of 12,497 Spanish surnames used to identify persons of probable Hispanic origin, correct?
A Correct.
Q What does that mean, the use of the word problem mean?
A It means that not everyone with a Spanish surname is a person who checks the Hispanic box.
Q So even using that list you're going to generate some false positives and some false negatives, correct?
A Using that list you're going to generate some false positives, and people not on the list will result in false negatives. In other words, the list of Spanish surnames only creates false positives. It cannot create a false negative because if you're on the list, you cannot be classified as non-Hispanic. You are classified as Hispanic, but you may not be Hispanic. That's

what is called a false positive.
Q Right. And a false negative --
A A false negative would be if your name is not on the list but you're still Hispanic. The fact that your name was not on the list and you were deemed to be non-Hispanic was a false negative because in fact you were positive, you were Hispanic.
Q That can't happen using the list of 12,497 Spanish surnames?
A It's a logical impossibility using the list. You can only use any name other than what's on the list to discern false negatives.
Q Now, the use of the word probable, does that -- is there any kind of qualitative or quantitative assessment of what it means by probable?
A I believe that is the exact term that the Census Bureau used in its documentation to imply that probable Hispanic -- probable enough to be useful from a statistical standpoint. It's their term, not mine.
Q But we don't know what it means in terms of the likelihood?
A I know that they have established statistical thresholds in their paper. I don't know what they are. But that's their basis for using the term

probable as a way of conveying likely enough to be helpful in identifying people.
Q In the list of surnames does it -- unfortunately we don't have a printout of those surnames or the 1980 paper. Is there an attribution of the percentage that are Latino with those particular surnames?
MS. LAZAR: Which list of surnames?
MR. POLAND: The 12,000. We're still on the 12,497.
A No. It is simply a binary distinction. The name is either on the list or not on the list.
Q So there's no attribution as to what percentage of the people with those names are actually Latino?
A Correct. I think there is something in the internal census documentation, possibly in the external research, that describes the minimum threshold for inclusion. But I don't think that every surname itself has a percentage detection rate, if you will, attached to it.
Q Do you know if there is anything that has been created that would show of those surnames that appear on the list of 12,497 names what percentage of those names are actually held by people of Hispanic origin?

A I think the overall percentage would be the false positive and false negative rates that I cited for the State of Wisconsin. I'm not sure what else is available. I know there's more detail, and I'm not sure how much of it was published as opposed to simply used as a way of refining the list.
Q Now, has there been any efforts to update that list of 12,497 Spanish surnames?
A No. The list that we're referring to here of 12,497 is unique in that it has been extensively studied and researched and all of its detection characteristics have been documented. To my knowledge there is no other list that the Census Bureau has or has created that has those characteristics. I know that if they had studied a more recent list as extensively they would have published it. They have I think done additional studies to confirm that the 1980 list that they established still works at least as well if not better in more recent times than it did when they first created it. I believe that was the basis for their maintaining it and not replacing it with a new list that had been essentially updated.
Q What additional studies have been done to look into the issue of Spanish surnames and connecting

those with people of Hispanic origin?
A I know that there are some papers on the Census Bureau website. At least one of them is the paper that is cited as Passel and Word, 1980. I don't know if there are other more recent studies. I know that the Perkins 1993 one is the last one that I had seen that has been done internally within the bureau. I personally had conversations with David Word, who is the co-author of and in fact one of the people who created the original list. I had conversations with him as recently as the middle of the 2000 years after the 2000 census, and he said that the original list was remarkably intact 20 years later. I know that the Census Bureau has created other lists and it has said, for example, here is a list of the -- which I think is what Dr. Mayer used. Here is a list of the 639 most frequently occurring heavily Hispanic surnames for people who want heavily Hispanic heavily occurring ones, but I do not believe that they have published the same degree of detection characteristics. They simply say if you want to know which names are most frequently occurring, then here are the top ones in the same way that you could say what are the ten most frequent

Hispanic surnames or what is the most frequently occurring Spanish surname. One could pick any criterion one wants, but these other variants of it have not been studied. I have no idea what the performance characteristics are of the 639 most heavily Hispanic surnames would be in detecting all of the Hispanics.
Q So in your opinion the list from 1980 that you used -- that's still considered the gold standard; is that correct?
A I would say it is the only suitable one for estimating what we want to estimate in this context.
Q Do you know the assumptions that went into making up that list?
A I know that there are established statistical standards, and I suspect that one could dig down beneath them and find assumptions in the text, the technical text, that describes how the research was done. I don't think that there are -- I don't think that there are any obvious assumptions other than the recognition of the fact that the list has false positives and not being on the list has false negatives and that these have been quantified. So the assumption one would make is

that if you know what those parameters are for the United States and then you know what they are for an individual state such as Wisconsin, the assumption would be that the tailored parameters found to apply in the State of Wisconsin are the ones one ought to use rather than for the nation as a whole.
Q Now, on Appendix A of your rebuttal report, which is Exhibit 53, you identify a publication by Passel and Word, correct?
A Yes.
Q And that has to do with constructing a list of Spanish surnames for the 1980 census, correct?
A Correct.
Q And Mr. Word is the person in the Census Bureau that you spoke with before?
A I spoke with him prior to his retirement. It would be somewhere around 2004, 2005. I've done some work with him just on a collaborative basis from a scholarly standpoint dealing with first names and basically picking his brains because he's kind of -- he is the authority or was the authority at the Census Bureau until he retired.
Q You have not spoken with him at all about Dr. Mayer's report or Dr. Mayer's approach, have

you?
A No.
Q And then you also have a publication by a man named Perkins, correct?
A Yes.
Q Perkins, R.C., 1993.
A Correct.
Q And who is Mr. Perkins?
A He either is or was until recently a Census Bureau employee who so far as I can tell kind of picked up the direction of research, was a collaborator with David Word and has continued it on. I should say he appears to have been the person who is designated by the Census Bureau to continue this line of research and to keep evaluating the surname list because it was being used within the bureau.
Q Have you had conversations with Mr. Perkins as well?
A I don't think I've ever spoken with him personally, no.
MR. POLAND: I'm going to mark a document here.
(Exhibit No. 54 marked for identification)

Q Dr. Morrison, I'm giving you a copy of a document that's been marked as Exhibit No. 54 and I ask you to take a look at this document. Is Exhibit 54 a document that you have seen before?
A Yes, I have.
Q When did you see Exhibit 54?
A I probably looked it over within the last six months at some point or other.
Q And you see this is a document that's authored -- one of the authors is David L. Word, correct?
A Correct.
Q And that's the Mr. Word whose report you cite in Appendix A of your rebuttal report, correct?
A Yes.
Q And then there's also a reference or the other author is R. Colby Perkins, Jr., correct?
A Yes.
Q And Mr. Perkins is the Census Bureau employee, again, one of whose reports you cite in Appendix A of your report, correct?
A Yes.
Q You see the title of this document Building a Spanish Surname List from the 1990s a New Approach to an Old Problem?
A Yes.

Q I would like you to turn to what's marked as Page 1 of Exhibit No. 54. It's marked as enumerated Page 1.
A I've got you. Okay. Sure.
Q I would like you to look at the very first sentence. Do you see there where it says, "This paper describes a direct and reproducible method for creating an inventory of surnames characteristic of the Hispanic origin population in the United States."
A Yes.
Q All right. Then I would like you to jump down to Section 1 which is the introduction.
A Yes.
Q Do you see there's a reference to the 1980 Census Bureau list of 12,497 different Spanish surnames?
A Yes.
Q And that's the list that you refer to in your rebuttal report, correct?
A Yes.
Q I would like you to look at the next paragraph down and the last sentence of the paragraph where it states, "This procedure works remarkably well for commonly occurring surnames but a great amount of hands-on effort was required to dispose of

infrequently occurring surnames that surfaced as Spanish on the initial selection pass." Do you see that?
A Correct.
Q Then it goes on to say, "In this paper, Perkins and Word discard that indirect Bayesian approach in favor of a direct method to reach the same ends. Here, instead of trying to classify surnames through geographic distribution, we actually link ethnicity and name." Do you see that?
A Yes, I do.
Q Now, I would like you to take a look at -- it's Page 15. I'm sorry. Make that Page 13. In Section 8.0 of the conclusion. "The authors hope that the evidence presented here convinces the reader that a well constructed Spanish surname list is a useful alternative for identifying persons of Hispanic origin when Hispanic origin is not known." Do you see that language?
A Yes.
Q And then I would like you to jump down to the next paragraph. It would be the third sentence. "Based on the analysis of the SOR file, fewer than 1,000 surnames are sufficient for capturing

80 percent of the Hispanic population in the United States. Moreover, householders with those surnames are Hispanic 95 percent of the time." Do you see that?
A Yes.
Q Do you have any reason to disagree with these conclusions that have been set forth in Section 8.0?
A No, I don't.
Q Then I would like you to look at Section 10.1 on Page 15.
A Yes.
Q It's the second full paragraph from the bottom. Do you see where it states, "For many purposes this abridged 639 surname list is sufficient for making a reasonably accurate assessment of the number or proportion Hispanic within a group." Do you see that?
A Yes.
Q Do you have any reason to disagree with that conclusion?
A It depends on what reasonably accurate means. I do have -- when you get done, I will tell you what the limitations are of this list.
Q And then I would like you just to turn to Appendix

Table A.
A In my report?
Q I'm sorry. No. This is in Exhibit 54. This is in the Word and Perkins paper.
A Yes.
Q And do you see those 639 most frequently occurring heavily Hispanic surnames?
A Yes.
Q All right. And you understand that's the list of surnames that Dr. Mayer used?
A Apparently it is, yes.
Q You were going to tell me of a problem or criticism that you have.
A Do you know the difference between a householder and a person?
Q Do I?
A Yes.
Q I do not.
A Do you know what the difference is in census terminology?
Q No, I do not.
A All right. If your name is Gomez and your wife's name is Mary Smith Gomez, the research is based on you as the household head if you declared yourself to be the household head. This research does not

refer to all persons. It refers only to household heads. So that is one limitation that would mean that what is said about this list as being a reasonably accurate alternative would apply if only household heads voted. But the fact is that household heads and other family members who may have taken on the surname of the household head also vote. Those latter individuals are not encompassed by this research. For some purposes this abbreviated list will suffice. It will suffice, for example, for marketing purposes. If one wants to identify Hispanic households that might be interested in buying Hispanic products in the local supermarket and live nearby the local supermarket, let's say within the standard radius of three to five miles, and the assumption would be that the Hispanic householder, the Spanish surnamed Hispanic householder, would be shopping for a family that perhaps favored Hispanic food, food that persons who are Hispanic typically eat as family members or household members. However, while it would be appropriate for that application, it would be in my judgment less appropriate and certainly the less preferred alternative for accurately identifying all persons

who might be Hispanic at the precinct level among voting age persons.

So I have no quarrel with the list that is described in this document, Exhibit 54. It is done to the same standards that the Census Bureau always applies which is it is a very high quality piece of research. It was in my judgment an effort to advance our understanding of how the list of Spanish surnames in an abbreviated form might be put together in a way that would be useful for certain purposes. I would also note that so far as I can tell -- to the best of my recollection there are no parameters that would allow one to account for false positives and false negatives. For a person who is marketing deciding whether to stock Hispanic food in a local supermarket, false positives and false negatives don't matter. You just want to get a rough idea of is this a heavily Hispanic area or a likely Hispanic area. Approximate values will suffice. For purposes of doing a statistical analysis such as Professor Mayer has done in which he is trying to divine the proportion of registrants who voted for one or another candidate from the aggregate statistical data that he has at the precinct

level, he is going to be committing the most serious errors in those precincts where the most information is embedded; that is to say the precincts that are either most heavily Hispanic or most heavily non-Hispanic. That would be what in our area is referred to as homogeneous precinct. So for his purposes far and away the first choice would be the list that I say should have been used. If he were selling Hispanic oriented food to supermarkets, his list would suffice.
Q It does remain true -- you made the distinction between persons and householders. It does remain true in the conclusion that I had read before where they say, "Fewer than 1,000 surnames are sufficient for capturing 80 percent of the population of the United States." That sentence remains true with respect to persons and not just limited to householder, correct?
A That's what they say. That means that you have got that troubling 20 percent that are not detected.
Q One of your criticisms in your rebuttal report of Dr. Mayer's report -- I'm going to jump down to the third section. You have questionable estimates of racially polarized voting?

A Yes.
Q Actually, let me mark Dr. Mayer's report here. Let me just mark this as an exhibit.
(Exhibit No. 55 marked for identification)
Q In Paragraph 12 you say -- this is your rebuttal report. You say, "The integrity of Dr. Mayer's analyses of racially polarized voting hinges directly on the integrity of that estimate. From what I can tell, he simply equated the count of registrants having one of the 639 most frequently occurring heavily Hispanic surnames with a count of all census enumerated Hispanic persons in a precinct." Do you see that?
A Yes.
Q Can you show me in Exhibit 55, Dr. Mayer's report, where that is set out.
A You mean where he made that statement?
Q Correct. Yes.
A I know he made it somewhere. Let me see if I can find it.
Q Sure. Go ahead.
A If you go to the very bottom of Page 20 of his report, which is Exhibit 55 -- I'm just going to read the sentence here. "To identify Latino

voters, I used the list of Word and Perkins, 1994, 20-21, that displays the 639 most frequently occurring heavily Hispanic surnames. For each individual with a surname on this list I classified them as Latino." That is what I meant by he equated them.
Q Now, is it your understanding that Dr. Mayer used his surname method in his ecological inference methodology that he employed?
A Yes.
Q And where does he do that?
A I know that this is the way it's done. I don't know exactly where he states it, but let me see if I can find a specific reference to it. On the bottom few lines of Page 17 he refers to Gary King's method and what he says -- he doesn't detail exactly how he did it, but what he says is I did the method. It's as though you said I took someone's temperature with the Mercury thermometer by putting it in their mouth and it read 98.6. You have haven't described exactly what happened in the thermometer to get it up to 98.6, but I know if he did what he said here using King's method, one of the variables that he used would be the percentage, some measure of the percentage of

registrants in a precinct, some measure of the Hispanic share of registrants in each precinct. And the analysis would have been of a matrix of data in which the precincts were each represented by a measure of how heavily or likely Hispanic the registrant share was.
Q Is it your understanding that that particular number would be captured within the statistical package that Professor King generated?
A I don't know exactly how he performed his analysis. I just know that this is the variable that he would use in such an analysis and if he used any other variable it would not have been the analysis at all and the variable that he used is the measure that he described, I classified those people whose name was on the list as Hispanic, and he could then only have taken that number and developed a share; that is to say of all of the names in Precinct 1 how many of those names were on the list. And then he would have made his estimate by simply equating the numbers. He would say there are, just as a hypothetical example, a precinct with 500 registrants. I found 100 of them to have names that are on the short list that I used, so that would mean 100 Hispanics, 400

non-Hispanics. That's the only way he could possibly have implemented it unless he did it in some fashion where he talked about using the Spanish surname list but he did something different that he didn't disclose.
Q You think by definition then Dr. Mayer had to use his surname analysis in his ecological inference method?
A I don't see any other alternative. But you can ask him if he did it some different way and we ought to know about it.
Q In Paragraph 18 of your rebuttal report, so again this is back to Exhibit 53, you state that Dr. Mayer's use of the statewide rate is demonstrably inappropriate and for a more reliable estimate you compile the ACS data for the specific census tracts that comprise Assembly District 8. These data show that Latinos are 40.9 percent of the district citizen voting age population as shown in Table 2 of your report that we were just looking at before. If we got Table 2 out and we look at that number, 40.9 percent -- now, this 40.9 percent that's in your Table 2 pertains to Assembly District 8 under Act 43, correct?
A Correct.

Q Do you know what the Latino percentage was in the previous Assembly District 8?
A Yes. That is set forth I think in one of the concluding paragraphs of my rebuttal report. Actually, it's in Paragraph 19. "I noted that the CVAP" -- I'm reading from the middle of Paragraph 19. "I noted that the CVAP of Milwaukee County" -- let me just skip.
Q Hold on a second.
A Let me just find where I made this statement. What I've done is I've simplified -- I established to my satisfaction with a high degree of scientific certainty that I could conclude that Latinos comprised a larger share of all eligible voters in the newly enacted 8th assembly district than they did in the former assembly district. I did not go through a very tortuous lengthy calculation process to try to establish how much lower the Hispanic share was in the former AD 8. It entailed considerable effort because one has a lot less data at that census tract level. Well, one has the same amount of data, but it's in a format that's much more difficult to do the computation in 2000. What I can state with a high degree of scientific certainty is that Latinos now

comprise a larger share in the newly enacted 8th district than they did in the former 8th district, and that conclusion, as I say, stands up even if you use Dr. Mayer's flawed calculation procedure.
Q What was the percentage of Latinos in the prior Assembly District 8?
A You mean among the citizen voting age population?
Q Yes. Correct.
A As I state, that's not something I calculated. I could only infer that it would be lower based on the two statistics that I cite here, the fact that the Hispanic share of the voting age population was higher countywide and that the percentage of the voting age population in the district itself was higher at the later point in time. But I did not, as I said, go to the trouble to calculate what the actual measure was at the earlier time.
Q But how do you reach that inference?
A When you have the two numbers pointing up as I indicated, it's impossible for one to conclude that the percentage could not have gone up over time unless one envisioned an influx of Hispanic adults all of whom were non-citizens none of whom were citizens and also a maturation of juvenile Hispanics over time into the 18 and older age

range among persons who were non-citizens. That didn't happen with citizens. In other words, you couldn't envision how the percentage, how the Hispanic share among the citizen voting age population of the 8th district, could not have gone up in light of these two other developments.
Q Did you ever compare the Hispanic citizen voting age population in Assembly District 8 under Act 43 to the configuration of old Assembly District 8 using 2010 census data?
A No, I did not.
Q Why wouldn't you have done that?
A I didn't know of any reason to do that. I wasn't asked any question that would require one to do that.
Q I note that you have testified previously from your CV that you produced with your report. You have testified previously in redistricting cases, correct?
A Yes, I have.
Q Have you performed a racially polarized voting analysis before?
A I myself have not, no.
Q You haven't done it for litigation?
A I myself have not, but I have been involved in

litigation where it was performed and I'm intimately familiar with how it's done and what's involved in with.
Q You have never presented one to a Court before or testified based on one that you performed?
A No.
Q And you haven't done it in your work as a scholar writing literature?
A What I have done is I have prepared the input data; that is to say the variable that I am saying Professor Mayer miss measured for colleagues who were performing racially polarized voting analyses, and I have -- so I'm very familiar with the data that one needs to do the analysis although I have not actually done it myself and presented it in testimony.
Q What colleagues have prepared racially polarized voting analyses before that you have prepared the data for?
A I have done it for Steve Klein who has written a number of articles on the topic. I've done it for Jeanne Gobalet, that's G-o-b-a-l-e-t, for some racially polarized voting analyses she's done. I think that's all I can recall.
Q Were either of those for the purpose of any

litigation, redistricting litigation or other litigation?
A Typically, yes. Either redistricting or defending existing districting systems or simply -- I should say the purpose of the analyses were in all cases to identify whether or not there was racially polarized voting, and, if so, to characterize it. Sometimes it was done in the context of litigation. Other times it was done in the context of ascertaining whether one was drawing district boundaries under circumstances where there was a history of racially polarized voting.
Q Any particular litigation where that's been done recently where you prepared data for a racially polarized voting analysis?
A Not in the context of litigation, no.
MR. POLAND: Can we take about a five-minute break here.
(Recess)
Q Dr. Morrison, are people who are not citizens included in the census numbers?
A If they fill out a census questionnaire, yes. I'm sorry. If they fill it out or if someone in their household mentions them on the questionnaire, yes.
Q Do you know why they're included in the census?

A Yes.
Q Why?
A Because the census is intended to enumerate all persons.
Q Living in the United States regardless of whether they're citizens?
A Regardless of whether they're citizens.
Q Are people who aren't citizens entitled to representation in government?
MS. LAZAR: Objection, calls for legal conclusion and not relevant to the discussion.
You may answer subject to that.
A It depends what you mean by representation. Do you mean political representation or do you mean --
Q Are they entitled to have their interests represented?
A My understanding is that all persons are entitled to political representation regardless of age or citizenship.
Q You have got a table at the end of your rebuttal report in Appendix B. That's the Data for Computing Age- and Citizenship-Adjusted Rates of Voter Registration and Turnout?

A Yes.
Q Do people lie about whether they register to vote?
A I have no basis for answering that question. I could only speculate.
Q Do you know whether there are any studies about whether people lie as to whether they have registered to vote?
A I don't know of any such studies, no.
Q Are there any ways of estimating the margin of error or the error rate associated with how people respond when they're asked if they have registered to vote?
A Not that I know of.
Q In the work that you have done have you seen any barriers to Latino participation in voting?
A Not in the work that I've done, no.
Q Have you observed other barriers to Latinos participating in voting outside of the work that you have performed?
A I'm aware of studies that claim that there are such barriers, but I'm not familiar with them myself.
Q Would you deny that there are barriers to Latinos participating in voting?
A I have no basis to deny or to accept.

Q You don't plan to express any kind of an opinion at the trial of this case as to whether there are or are not barriers to Latinos participating in voting?
A I have no intent of expressing any such views, no.
Q Dr. Morrison, you have recently participated in litigation in Illinois over the redistricting going on down there, correct?
A Correct.
Q And that was the Committee for a Fair and Balanced Map litigation?
A That's my recollection of the name, yes.
Q Who were you retained by in that case?
A I was retained by plaintiffs.
Q Who were the plaintiffs in the Illinois case?
A I don't even remember the name. It's whoever was on the top or bottom part of the caption. If you tell me what it is, it will probably refresh my recollection.
Q The democrats are in control to the south of here, right, in Illinois?
A I know it was the republicans. I just don't know what the named plaintiff was.
Q Fair enough. But it was the republican group that was challenging the democrat controlled

redistricting in Illinois?
A Correct.
Q And then you also were retained and expressed opinions in the Fletcher case in Maryland, correct?
A I did a very quick analysis in Maryland, yes.
Q Who were you retained by in the Fletcher case in Maryland?
A My understanding there is it was the plaintiffs again although I don't remember the caption name. If you tell me what it is, I will probably recollect who it is.
Q Fletcher was the name on the case when I --
A All right.
Q -- saw it, and I believe that's the name of at least one of the plaintiffs.
A Right.
Q Was it the republicans also who were challenging the democrat redistricting plan in Maryland?
A You know, I can't -- I really can't say with certainty. I know this sounds silly, but I was paying more attention to a very tight deadline and trying to assemble the demographic data for the client. I don't really recall -- I would have to go through and check. I know it was one or the

other.
Q In the Illinois case you did submit an expert report?
A I did, yes.
Q Did you testify at the trial there as well?
A I did.
Q What about in the Maryland case?
A In the Maryland case my understanding is it was going to be -- it was heard by a panel of judges. I was told initially there will be no live testimony. There will simply be reports filed.
Q And so you did file a report in Maryland?
A Right.
Q But were never called to actually testify live at any kind of a trial?
A Correct.
Q I would like you to get out Exhibit 32 which is your report. We're going to spend the rest of the time here really looking at your report.
A This is my first, the December 14th one?
Q Correct. That's Exhibit 32. I'm going to try to fill in some of the gaps here that I missed as I was going through the documents. In Paragraph No. 7 of your report the last sentence of that paragraph you say, "In Wisconsin fully 36 percent

of Hispanics of voting age are not yet citizens hence ineligible to vote." Where do you get that number from?
A That would have been from the American Community Survey.
Q Was that number in one of the tables that we looked at earlier as we were going through the documents that you produced?
A It should be, yes. That's the only place I could have gotten it.
Q Was there also a number for Milwaukee County in the ACS data?
A There would have been another table that corresponds to Milwaukee County from which the same statistic could have been computed. I don't know that I computed it because I don't see it mentioned in the text here anywhere.
Q Is that number, the 36 percent number that you have in Paragraph 7, that is not used in your Table 1, is it?
A I don't believe so. It's not used, but it is implicit in the table in the sense that you could compare the Hispanic voting age population with the Hispanic citizen voting age population and that should give you the percentage, the

corresponding percentage, of what percentage of Hispanics of voting age are not yet citizens.
Q Then you also have the statement that 1 percent of non-Hispanics of voting age are not yet citizens. Does that also come from the ACS data?
A Yes.
Q And, again, that should be reflected in one of the reports that you had produced among the documents?
A It should be something that one could compute just by comparing two numbers and doing a calculation. I don't know that I set it forth explicitly. I may have calculated it from the table and put it directly into my summary Table 1 in my report. But the raw data on which it is -- I should say the data on which that statement is based will be among the data from the ACS for 2010.
Q And the 1 percent number does not appear on your Table 1 explicitly?
A Correct. Although one could derive it from Table 1 by doing some calculations, subtracting the Hispanic from the total to get the non-Hispanic and then doing that exercise for both voting age and citizen voting age and then you would have the total non-Hispanic voting age population and then the total non-Hispanic citizen

voting age population which would be within 1 percent of it. In other words, you could derive the number in the text from Table 1 if you just sat down and did two or three calculations.
Q I would like to turn your attention to Paragraph 8. In Paragraph 8 you state, "Clearly Hispanics moving into Milwaukee County have replaced non-Hispanics moving out." Do you see that statement?
A Yes.
Q Do you base that statement on the actual numbers of Hispanics moving into Milwaukee County?
A No. I base it simply on the comparison of the county gained 8,000 people but Hispanics increased by 44,000. The only way in which a number that big, 44,000, could have come about in a county that gained only 8,000 people would be either a phenomenal increase in the number of births, a reproductive renaissance as it were, or by people moving in.
Q I was going to ask you that precise question. It could be also that people were born there as opposed to moving in, correct?
A Yes. But I don't see any way that differential births could have accounted for that big a

difference.
Q Did you look at any birth rates?
A No. There's no need to. It's clear that this is a function of people moving in.
Q Did you base your statement on any actual numbers of non-Hispanics moving out?
A No.
Q People could have died as well, right?
A Another possibility is that there was an enormous number of deaths among non-Hispanics. But I do not see a natural increase; that is to say the affects of births added or deaths subtracted could possibly account for what we see here, the 44,000 compared with the 8,000.
Q Again, though, you didn't look at those other reasons that people might have ceased to be listed as Milwaukee County residents?
A Yes. There's no reason to do so.
Q That's true of both Hispanics and non-Hispanics?
A That's true for the statement in Paragraph 8.
Q Now, in Paragraph 9 you refer to the map that's in Figure 1.
A Yes.
Q The copy that we had received was black and white I think and it was copied in that way so it was

hard to tell and I'm sure from your copy it's pretty difficult to tell the variations.
A Correct.
Q Do you have a color copy of that map?
A There is a color copy of that map on the thumb drive somewhere.
Q Okay. Great. Now, you state in Paragraph 9 that the -- this is kind of hard to see I think in the figure, but you say, "The black boundary shown in Figure 1 encompasses neighborhoods that are home to over three-fifths of all Hispanics in Milwaukee County and which form a naturally occurring community of interest." Do you see that?
A Yes.
Q If you look at Figure 1, and I know it's very difficult to make out any of the boundaries here, you identify -- generally speaking if you look over on the right you identify a range of Hispanic population within certain areas, correct?
A Yes.
Q And where do those numbers come from that are in there?
A Those numbers come from -- that would have come from the 2010 census block group data that are simply counts of total Hispanics without regard to

age or citizenship. It's just the total Hispanic population.
Q So it was by block group?
A Yes.
Q And you just counted them up then?
A It's not a matter counting them up. It's a matter of displaying the block group data on a map in a way that shows how the large concentrations of Hispanics are all adjoining each other in a particular area.
Q And these are all Hispanics that are captured by this, correct?
A I don't know what you mean by the question.
Q It's not limited by age range?
A Correct. It is anybody who is Hispanic regardless of age or citizenship.
Q Now, it's pretty difficult to see in Figure 1, but the black boundaries that you have depicted on Figure 1, do they coincide with Assembly Districts 8 and 9 under Act 43?
A Yes. It is the combination of those two assembly districts.
Q Now, there are adjacent areas on this map, by adjacent I mean adjacent to the black boundary area, that extend outside that area that do

contain numbers of Hispanics as great as some of the areas inside the black boundary, correct?
A Yes. That's entirely possible, yes.
Q When you state that these neighborhoods form a naturally occurring community of interest, what are you referring to?
A I'm referring to the fact that virtually all of these block groups have a significant number of Hispanics residing there and insofar as being Hispanic defines a community of interest one could refer to this area as a naturally occurring community of interest that is an aggregation of neighborhoods.
Q And some of those neighborhoods that are part of the community of interest extend outside of the black boundary of Assembly Districts 8 and 9, correct?
A Yes.
Q In Paragraph 10 you refer there to demographic influences that will further boost the Hispanic share of eligible voters in communities within and adjacent to the Hispanic enclave visible in Figure 1, correct?
A Correct.
Q Are all of the influences that you identify there

are identified in your report or referred to in your report?
A Yes.
Q By enclave what are you referring to?
A I'm referring to a concentration of individuals in a particular area and adjacent neighborhoods which is recognized by both those who reside within it and those who may reside elsewhere in the county or who may be moving into the county as an area where like-minded individuals have congregated residentially in the same way that one would refer to Irish enclaves in Boston or Polish enclaves, and I'm talking about past history now, in Chicago and other areas. In Milwaukee, for example, an enclave is significant not only because it exists as a concentration of a group but because it has a self-perpetuating affect in attracting other like-minded individuals to that area rather than scattering randomly over the landscape.
Q Now, the Hispanic share of eligible voters will increase not only in Assembly Districts 8 and 9 but also in some of those adjacent communities too, correct?
A That's entirely possible, yes.
Q In Paragraph 11 you state that one of the

demographic influences that is identified in Paragraph 10 is Hispanic spacial mobility, correct?
A Correct.
Q And you identify that in a little more detail in Paragraph 14, right?
A Correct.
Q Or beginning I should say in Paragraph 14. Right? In Paragraph 14 you identify two what you call "important forces" that you say "Spur the growth and spacial concentration of Hispanics in Milwaukee County," correct?
A Yes.
Q The first one that you identify is migration into the county, correct?
A Yes.
Q And the second one is you recognize local residential movement within the county, right?
A Correct.
Q You say you have published extensively on both topics and in Footnote 1 you identify a book chapter that you wrote, correct?
A Yes.
Q Did that book chapter examine Milwaukee County?
A Not explicitly, no.

Q What area did you study?
A It really was a national level study. It was a study that described the processes of internal migration and short distance mobility within the United States anywhere within the United States.
Q When you say internal migration, what do you mean by that? What was studied?
A Internal migration is the movement of population within the United States. So someone moving from California to Wisconsin would be an internal migrant. Someone moving from South America or Europe to Wisconsin would be an international migrant. A person leaving Wisconsin for California would be an internal migrant. A person moving from Wisconsin to Europe would be an international migrant.
Q Have you ever studied migration patterns either into or out of Milwaukee County or within Milwaukee County?
A Not to my recollection. I did do a demographic study a long time ago in this area. It would have been perhaps 20, 30 years ago in conjunction with I think a school desegregation case, and I can't rule out the possibility that I looked at some flows of population movement in this area. But I

don't have any recollection clearly of when it was or what it was other than it had to do with school desegregation.
Q And when you refer to short distance mobility in the chapter that you wrote of the book that's referred to in Footnote 1 in your book, what distances were you examining there for short distance mobility?
A Typically one is talking about residential mobility which is moving in the same metropolitan area from one neighborhood to another. In other words, it's a move that would be considered still within the same general area typically defined by a county or by a collection of counties that form a metropolitan area.
Q In Paragraph 15 you state that the U.S. Census Bureau's ACS for the period 2006 to 2010 yields the most precise current measures of geographic mobility, correct?
A Yes.
Q And why do you make that statement?
A Because it's the only data we have more recent than the 2000 census and one needs the five-year file for the level of precision that one would want to detect those who have moved within the

population.
Q In Paragraph 16 you state that the ACS data document and annual influx of 1,812 Hispanic immigrants to Milwaukee County from another state -- do you see that?
A Yes.
Q And by immigrants you don't mean immigrants to the United States, correct?
A What I said is in-migrants. There's an important semantic difference here. In-migrants means people who moved in. If they had moved from another country, they would be referred to as immigrants with two Ms.
Q All right. It may be an artifact of the copying here. Looks like an i-m-m on my copy. What data are these numbers based on? Is this the 2006 to 2010 ACS data?
A Yes. Yes. And I think the source is footnoted in Footnote 2 on Page 6.
Q So, again, those are the tables in the ACS 2006 to 2010 data?
A Correct. If you go to those tables and print those out, you will see exactly the data that I used.
Q We had the discussion earlier when we were talking

about the ACS data. I had used the term average annual and you said no, that's wrong. It's an aggregate number.
A It describes the annual number during a period, during a five-year period. It doesn't refer to any one year, but it is on an annual basis.
Q Was there any calculation that you had to go through to come up with that 1,812 number or was that straight out of the data do you remember?
A I think there may have been a calculation of adding two numbers together in the table or dividing one number by another, but it was -- there's no elaborate calculation that's the source of the numbers.
Q Do you know if there's any trend in that data, if it's increasing year over year or decreasing?
A No. There's no way to detect a trend in these five-year data.
Q That's for Milwaukee County as a whole, correct?
A I believe so, yes. That's what it says.
Q So it's not just for the enclave area identified in Figure 1?
A Correct.
Q You also state, "The ACS data document 1,140 Hispanic," let's see if I can get the word right

this time, "in-migrants from elsewhere in Wisconsin."
A Correct.
Q Again, that comes from the same ACS data that you had referred to before?
A Yes.
Q Now, the totals of these two numbers are 2,952 Hispanics moving from other parts of Wisconsin to Milwaukee County annually?
A The total influx of 2,952 is everybody moving into the county either from other counties in Wisconsin or from other states in the United States.
Q So it is from other states as well?
A Yes. The combination is everybody who moved into that county from anywhere in the United States of America other than that county.
Q We don't know where they're actually moving to in Milwaukee County, correct?
A No. We don't.
Q So it could be the areas that you have identified in your enclave or it could be other areas, correct?
A Correct.
Q Now, you also identify 2,791 Hispanics moving out of Milwaukee County to a different county or state

each year, correct?
A Correct.
Q And, again, that's based on the 2006 to 2010 ACS data?
A Yes.
Q It doesn't count Hispanics moving to a different country, correct?
A Correct.
Q And that's not captured in the analysis that you set forth?
A Correct.
Q Does that ever happen?
A I'm sure it could happen, but the ACS surveys people in the United States. It doesn't conduct surveys of people elsewhere on the planet, so we have no interviews with people who may have left Milwaukee County whether they're Hispanic or non-Hispanic. That's an unknown from the ACS.
Q Outside of the ACS is there any data that you're aware of that could be used to estimate rates, annual rates, of migration to foreign countries?
A Certainly not for Milwaukee County, no.
Q So the estimates of out-migration would be an underestimate of Hispanics moving out of Milwaukee County to the extent that they exclude Hispanics

moving abroad, correct?
A That's correct. And I think I pointed that out.
Q Does this paragraph capture Hispanics who die?
A No. It's only about Hispanics who are surveyed and asked the question where did you live before or Hispanics -- they are people who were alive at the time of both interviews.
Q So it doesn't capture Hispanics who would leave Milwaukee County for a variety of reasons, correct?
A It would capture all of them who left Milwaukee County except those who moved outside of the United States.
Q Or ones who died?
A Or ones who died, correct.
Q Any other reasons that you can think of that a Hispanic who left Milwaukee County wouldn't have been captured in that data?
A No.
Q Now, you identify a total increase in Milwaukee County's Hispanic population of 161 residents, correct?
A That would be the net influx, yes.
Q The net effect as you state in Paragraph 16?
A Right.

Q And that again is an annual number based on the 2006 to 2010 ACS data?
A Yes.
Q And we don't know how those people are distributed throughout Milwaukee County, correct?
A Correct.
Q And then in Paragraph 17 you identify from the ACS data a further annual influx of 1,500 Hispanics moving from aboard, correct?
A Correct.
Q And that's not tied to either Wisconsin or Milwaukee County there is it?
A No. I believe what I'm referring to there is Milwaukee County.
Q It is Milwaukee County?
A Yes.
Q Okay.
A That would be 1,500 Hispanic in-migrants from abroad moving into Milwaukee County.
Q Is that the five-year ACS data?
A That's the same five-year ACS data. The same tables that are shown in Footnote 2.
Q Again, that pertains to the county not specifically the Hispanic enclave or Assembly Districts 8 and 9, correct?

A Correct.
Q So then you add that number to the 161 Hispanics coming into Milwaukee County as calculated in Paragraph 16 and you get a total of 1,661 Hispanics moving into Milwaukee County annually, correct?
A Correct.
Q You go on then in Paragraph 18 and take the 1,661 Hispanics who come into Milwaukee County annually and divide that number into a population of 126,039 Hispanics in Milwaukee County to calculate a maximum 1.3 percent annual increase in the number of Hispanics in Milwaukee County, correct?
A Correct.
Q We talked earlier in your deposition about where you got the 126,039 number for Hispanics in Milwaukee County, correct?
A Yes.
Q In Paragraph 19 where you state that the increased translates into a -- I'm sorry.
A Paragraph 18. You're talking about Paragraph 18.
Q Paragraph 18. Yep. I'm sorry. I'm in the wrong paragraph. A 0.16 percentage point increase in Hispanic share of Milwaukee County's overall population. How did you perform that calculation?

A When you think about it, it's simply saying take the population as you have it, add in 1,661 Hispanics and then add in 1,661 to the total population and compute the Hispanic share and then compare it to what it was before you engaged in that exercise. Just envision adding 1,661 new people and they're Hispanic.
Q Okay. All right. I see. Again, that does not include foreign outbound migration, correct?
A Correct.
Q Then at the end of Paragraph 18 you use your previous calculations to arrive at the opinion that the Hispanic share of population in Milwaukee County would increase from 13.3 percent in 2010 to 14.9 percent by 2020, correct?
A Yes. That's the maximum it would increase.
Q All right. How do you make that calculation?
A I engage in the hypothetical calculation I just described to you ten times, in a ten time sequence I think. Either that or I took -- if I said the percentage point increase was .16, I increased it by 1.6 percent. Actually, that's what I did. I said if it goes up .16 percentage point in one year, in ten years it will go up somewhere in the order of 1.6 percentage points. I added 1.6 to

13.3 and came out with 14.9. So that's just kind of a rough estimate of -- it could not have gone up to more than 14.9 percent and probably less because we don't have the Hispanics who moved out of the country.
Q In Paragraph 20 you begin your age structure analysis, correct?
A Yes.
Q And we talked about that a little bit earlier in your deposition, right?
A Yes.
Q Now, you say in Paragraph 20, "This factor guarantees such increase because it is built into the population structure." Do you see that?
A Yes.
Q The word guarantees a little strong there?
A I don't think so, no.
Q Is it really a guarantee or is it a projection based on certain assumptions?
A Well, it's a guaranteed part of the projection. The only thing that could change this would be if there were a major draft that suddenly enlisted an enormous number of juveniles in the military and suddenly carved out or there was a major epidemic in which 20 or 30 percent of the one group in the

population died off. Apart from that, this part of it is about as sure a guarantee as we have.
Q You're basically assuming then that the current factors that affect the age structure are going to remain the same; is that fair to say?
A I'm assuming that there is nothing that could possibly change the age structure differences that are at this point quite stark and quite substantial in the near future that would cause their affect to disappear. I can envision things that might strengthen the affect of age structure or weaken it, but I cannot envision any scenario in which this factor would not spur continuing increase as I've stated. I haven't said how much of an increase, but I cannot envision that statement being negated by factors in the next ten years.
Q Have you tried to estimate or calculate any rate of probability at all associated with that statement or that projection?
A I don't see any way of associating different probabilities with different scenarios, but what I have done is in the demographic accounting model spelled out the implications of the current age structure assuming that it remains as it is. I

believe that gives us the most reliable projection of what will unfold in the future.
Q In Paragraph 21 you state, "Proportionally more Hispanics are in the under 18 age range relative to non-Hispanics, 39 percent compared with 23 percent." Do you see that?
A Yes.
Q What's the basis for that statement?
A That would be one of the tables that is either in my report or -- I don't know if it's in my report per se, but it's one of the tables that we have already reviewed today.
Q That was one of the tables that you had produced here this morning that we went through?
A Yes.
Q Do you recall was that based on U.S. data, Wisconsin data or Milwaukee County data?
A It's Milwaukee County data for sure.
Q Now, you state that the over 65 age range encompasses the ages at which significant numbers of eligible voters die off. Do you see that?
A Yes.
Q And what's the basis for that statement?
A That would be the mortality tables that I referred to before from the National Center for Health

Statistics.
Q Those were attached to the documents that you produced in --
A Yes.
Q -- what's marked as Exhibit 52?
A That's the one that I sent in initially when the request came in for documents. I believe that's the correct exhibit, yes.
Q For the record, it's behind Tab 2. This is the United States Life Tables by Hispanic Origin; is that correct?
A I'll take your word for it.
Q You also have a statement where you say, "Hispanics under age 18 are predominantly citizens whereas many adult Hispanics have yet to become citizens." Do you see that?
A Yes.
Q What's the basis for that statement?
A That will be derived from one of the ACS tables that show the under 18 Hispanic population distinguished by citizenship.
Q Just comparing the under 18 versus the over 18?
A No. It would be the under 18 population comparing citizens to total under 18 and then doing the same comparison for the 18 and over, and that would

support the statement where I said under age 18 are predominantly citizens. Well, yes. Each of those comparisons would support one clause in that sentence, the first clause referring to the under age 18 being predominantly citizens and the second comparison referring to the second clause referring to many adult Hispanics yet to become citizens.
Q I would like you to turn to Paragraph 25 of your report, please.
A All right.
Q In Paragraph 25, the last sentence, and you're talking about your demographic accounting model here, you state, "To quantify this change, I calibrated a demographic accounting model that captures the mutually reenforcing effects of age structure alone." Do you see that?
A Yes.
Q What do you mean by mutually reenforcing?
A What I mean there is the expansion of the Hispanic share of voting age persons as juveniles age into the voting ages and also the subtraction of non-Hispanics from the elderly voting age persons. So it's a combination of young people growing older and old people dying off with the former

being more heavily Hispanic the latter being more heavily non-Hispanic.
Q In your demographic accounting model, does it take anything into account -- strike that question. Are there any factors that you left out of your demographic accounting model that could affect the outcome of it?
A Which outcome are you referring to?
Q Well, the conclusions that you reach. Let's pull it out.
A I'll take that. That answers my question. Are there factors that I have left out? There are obviously all sorts of things that could happen in the world, but there are no factors that I've left out that I could have quantified the way I have.
Q So, for example, you took into account juvenile aging, correct?
A Yes.
Q And mortality?
A Correct.
Q Now, what other factors could you have taken into account but didn't include?
A What other factors could I take into account with existing data or what other factors could one think about taking into account?

Q With existing data.
A None that I know of.
Q All right. Does everyone born into a household stay there forever?
A No.
Q Are there any ways that you know that you could measure where people who leave households -- strike that question. There are reasons, and we have gone over some of these before -- there are reasons people leave households other than dying, correct?
A Correct.
Q And those are not included within your demographic accounting model, correct?
A I know of no way to include them with available data for this particular level of geography.
Q In Paragraph 26 you refer to Table 3 and you state that for Assembly District 8 the Hispanic share of the citizen voting age population is increasing at least one percentage point annually and will continue to increase at that rate through 2020, correct?
A Correct.
Q Now, where do you take the 1 percent number from?
A Well, that would be a number that derives from my

calculations in my demographic accounting model. I'm not sure if I can show you exactly where it came from but somewhere in the tables that I've given you, I believe it's in the table that corresponds to the -- it's the demographic accounting model and the sheet that is called Juvenile Aging if I remember correctly.
Q So if we look at --
A That should --
Q -- Exhibit 52. And it's behind Tab No. 1.
A Right. Behind Tab No. 1 the spreadsheet called Demographic Accounting Model Juvenile Aging contains the calculations. If you read across in the citizen voting age population, the 18 and older, you will see year by year the projected number of total CVAP, Hispanic CVAP, non-Hispanic CVAP and then the calculation of the percent of CVAP. If you examine the formula within the cells in this spreadsheet, you will see that what I've done is for each year I have added in 1/18th of the under 18 population. So I've said if you take the under 18 population and imagine it is one year later, 1/18th of them; that is to say the 17 to 18 year olds -- I should say the 17 year olds will have become 18 year olds. One adds them into the

voting age population, both the Hispanics under 18, the 1/18th of them, and the 1/18th of the non-Hispanics, adds them in -- it's a very simple calculation and then computes the percent who are Hispanic among the voting age population.
Q And that assumes -- I think we have been over this before. That assumes no mortality in that particular age group.
A This is no mortality. This is without the effects of mortality which is covered in the other spreadsheet. This simply says if you keep adding in youthful people who turn 18 this is the calculation that shows what the Hispanic share will be before you take out the people who die off.
Q Right. But in the mortality table, which precedes it by one page, there are no calculations given for mortality, correct?
A Correct.
Q All right. And the numbers for the Assembly District 8 and 9, those demographics come from the spreadsheet that you received from Mr. Handrick, correct?
A No. This is the citizen voting age population that I'm doing the calculations on. So this would

come from that five-year 2006-2010 ACS file that I used at the census tract level.
Q Was this the spreadsheet then that you had suggested I scratch out the reference to the Excel file of assembly district population composition furnished by Joseph Handrick?
A Yes. That's the one. Right.
MR. POLAND: Let's go ahead. He needs to change the tape.
(Recess)
Q Dr. Morrison, I was just asking you about the 1 percent projection that you had in Paragraph 26, and you mentioned that that derives from calculations in the geographic accounting model, correct?
A Yes.
Q Do you know whether those calculations are set forth or included within the model that's been produced to us in electronic form?
A Yes. If you go to the spreadsheet that we're looking at here, the one that we have printed off that is entitled Demographic Accounting Model Juvenile Aging, if you look in the cells themselves, for example, where you see -- you see the band of data that goes off to the right in the

center where there's a lot of empty space above and below?
Q Yes.
A Any one of those cells, if you look in there, will show the equation that calculates what the number is going forward year after year. So that documents exactly how the projection was made.
Q You also state in Paragraph 26 that as of year 2020 the Hispanic share of the citizen voting age population was 42.9 percent up from 40.9 percent as registered on the 2006 to 2010 ACS. Do you see that?
A Yes.
Q Where does the 42.9 percent number derive from?
A If you look at the third column of numbers on that spreadsheet; that is to say under Assembly District 8, the top number of which is 28,279 -- do you see that?
Q Yes, I do.
A Below you see 42.88. That's 42.9 percent rounded off.
Q Got it. You then project that in November 2012 Hispanics with constitute 44.9 percent of the CVAP in Assembly District 8, correct?
A Did I say 40 --

MS. LAZAR: Look at Paragraph 26.
Q It's Paragraph 26. "I project that Hispanics will constitute at least 44.9 percent of the CVAP in AD 8."
A In 2012. That encompasses both the effects of the juvenile aging which gets you up to 44.62. If you read over in that juvenile spreadsheet you see where --
Q Yes.
A -- there is the 44.62. Then what I have done is included an estimate that is based on the mortality which is shown in the preceding spreadsheet. So here we have a combination of both the juveniles aging in and the elderly dying off.
Q Now, why did you add it in at this particular stage?
A I think I was just trying to make a statement that was relevant or pertinent to the November 2012 election to a particular point in time. In other words, what one has to do is one has to combine what's in the juvenile aging spreadsheet which gives you a particular Hispanic share as of a particular year with the mortality estimate which is shown in the preceding one. I'm not sure

exactly where -- I don't think I've shown an annual calculation, but I've shown a five-year difference.
Q Again, if I were to go to the spreadsheet where it's on the electronic data, would I see that number calculated in there with both of those factors?
A No. You would not. You would not see them both calculated in there. These are two separate analyses. One was to combine them together. What the juvenile one is showing is a little less than a one percentage point increase. So I say aging of the juveniles into the voting ages is increasing the share by a little less than one percentage point. And then when you go to the five-year survival spreadsheet, you will then -- somewhere I've shown the estimate of how much mortality alone is increasing the percentage, the Hispanic share. So it's those two separate analyses put together that gets you up to a minimum estimate that I made. I think I said that it was at least 1 or 1.1 percent increase per year. I'm not sure where I said that.
Q That was something I was going to ask you about as well. In Paragraph 27, where you're talking about

Assembly District 9, you talk about at least 1.1 percentage points per year, and then on the very last page of the text of your report, Page 12, this is in Paragraph 33, you say, "For CVAP I calculate this increase will be at least 1 to 1.1 percentage points per year."
A I think Table 3 is the one that shows the final amalgamation of these two effects. They don't fit together tightly in a single calculation. You have to sort of take one analysis and say this is one driving factor and then you have to take the mortality analysis and say this is another driving factor and then you have to combine them together and that combination is in Table 3.
Q Is there anything in your work papers or in the electronic files that show how those two are combined together to generate these numbers?
A I recollect that there is, but I don't know that I can point to it. I know that I did the calculation and I know that it was in my file and I'm fairly certain it will be among the hard copy documents rather than in an electronic file because the electronic files are kind of the set-up that gives the information to do the final calculation and it's very likely that you would

see it on a hard copy very possibly with my notations on it.
Q It might be in one of the documents we saw where there was handwriting on it with some calculations?
A Yes. That would be my first place to look. If not, I would be happy to reconstruct it at some point because I know it's somewhere on a piece of paper.
Q I know there were a number of handwritten notations on the ACS printouts that we looked at.
A Yes. It could be there. It would very likely be a handwritten notation.
Q So for the projections that you make in Paragraph 26 and Paragraph 27, that is essentially the process that you just talked through a few minutes ago from your demographic accounting model with juvenile aging?
A You have to say that again. I believe that we were both talking about the juvenile aging and the mortality model together.
Q And that's what generates the output in your Table 3?
A Yes. Table 3 is the summary of the data that I regard as the scientifically best basis,

scientifically most accurate basis for characterizing the Hispanic share of voting age citizens on the basis of both the juvenile aging process and the mortality process, and these numbers set forth my opinion with a high degree of scientific certainty as to what those percentages will be in the future.

Q And these are the calculations that you were referring to that we should be able to find when we look through the hard copy documents?

A Correct.

Q All right. In Table 3 you estimate Hispanics will not have a majority of the CVAP in Assembly District 8 until November 2018, correct?

A That is correct.

Q And they won't have a majority of the CVAP in Assembly District 9 even in 2020, correct?

A Correct.

Q Did you run your model at all beyond November 2020?

A No, I did not, but it would be entirely possible to do so.

Q You don't render any opinion regarding at what point of Hispanic CVAP is large enough to elect a candidate of choice, do you?

A No, I don't.

Q And that's not an opinion that you will render at trial, is it?

A No, it's not.

MR. POLAND: I'm done.

EXAMINATION

By Ms. Lazar:

Q Dr. Morrison, we're going to be very quick. I do not need you to look at the exhibits. If you recall, you produced a stack of documents that were marked as Exhibit 49. In that stack of documents there was a point where we discussed where you were doing the percentage breakdowns for the census tracts between AD 8 and AD 9, correct?

A Yes.

Q At that point in time you were asked some questions about the allocation method that you used. Would you state that the method you used was the standard demographic practice?

A It would be a standard demographic practice in that kind of circumstance where one had to make an allocation and one had no available basis for doing so.

Q And would that practice that you used be generally

accepted in the demographic community by most demographers?

A It would be the generally accepted practice that demographers use in this type of situation.

Q At the conclusion of that discussion you mentioned the breakdowns going from census blocks to census block groups to census tracts, and there was a question regarding you didn't go down to the census block to determine citizenship. Is that even possible?

A It's not possible to measure citizenship at the block level as of 2010 or ever since the 2000 census. There are no such data since the 2000 census except for the ACS, and that only goes down to the block group level. It does not go down to the block level.

Q Thank you. In this case you have provided two reports. Both of them have been marked in this case as Exhibits 32 and I believe 53; is that correct?

A Correct.

Q Would you state that both of your reports have been done to a reasonable probability based on your education, training, and experience based upon your background?

A I'm not sure what you mean to a reasonable probability of what? A reasonable scientific standard?

Q The questions I'm asking you come out of other expert reports. I'm asking if you would agree that your report as well was to a reasonable probability based on your education, training, and experience.

A Yes.

Q Would you also agree that your opinions expressed in both those reports are to a reasonable probability grounded on sound statistical practice based upon your training and experience?

A Yes, I would.

Q And that the data you relied upon are typical of the data relied upon by professional statisticians in making statistical analysis in matters of this nature?

A Yes, I would.

Q And would you also agree that your opinions are based on the technical -- your opinions, let's start that over. Would you also agree that your opinions which are based on the technical and specialized knowledge that you have gained from your education, training, and experience are

premised on widely accepted and reliable methods of analysis and application of traditional redistricting criteria?

MR. POLAND: I'm just going to object to the form of the question.

Q You may answer.

A Yes, I would.

Q And that those opinions are based upon review and analysis of information and materials you received from the census, the ACS and/or Mr. Handrick?

A Yes, I would.

Q Finally, would state that your reports and opinions are at least to a reasonable degree of scientific certainty?

A Yes, I would.

MS. LAZAR: Thank you, Dr. Morrison.

RE-EXAMINATION

By Mr. Poland:

Q One follow-up question. Dr. Morrison, do I understand it to be the case that you can go down to the block group level to get citizenship data?

A I believe you can with a five-year file, but I'm not even sure if you can do it to the block group

level. If you can, typically they have -- I'm sorry. I take that back. You could do that with the 2000 census special tabulation file. With the ACS file I know that they don't even publish the data at the block level. If they do publish it at the block group level, it typically has for this application margins of error that are so enormous as to render the data essentially useless.

Q Do you know what the margins of error are?

A I can give you a typical example. You might have a block group in which the ACS, and I'm just giving you an illustration of the kind of thing one would encounter -- I've seen this for whole census tracts so I know it would be true of block group, where the Hispanic share of the citizen voting age population might be measured as 35 percent plus or minus 70 percentage points. So it could be anywhere from 0 to 100.

Q And your understanding is that at the block group level the error rate in citizenship data is in the area of what you just stated?

A What I'm saying is the margins of error are so large that it renders the data essentially useless for measuring anything at the block group level. I'm not even sure if they issue it at the block

group level. I do know that what happens is that in many instances you will have a census tract for which there is a measure based on five-year data and it may be that there will be within that census tract five census block groups that comprise it and the Census Bureau will issue data for one of those or two of those block groups but for the other three it will suppress the data because it's based on too few interviews. So what you will have is the appearance of a census tract in which several of the block groups have no residents but in fact they do have residents it's just the Census Bureau cannot disclose the number to you so it renders the data essentially useless.

Q The sample size is too small to give any kind of --

A That's correct. It may have been that in the block group they interviewed five people one of whom was Hispanic. So if they said this block group is 20 percent Hispanic they would say it's that guy that we interviewed and the other four weren't. They would immediately suppress it. They have confidentiality suppression criteria that they use. As I say, I'm not sure if they ever release block group data. I know that they

release census tract data and my recollection is that they under no circumstances release block data and I don't recall if they have block group data but I know it's essentially useless for any practical purpose.

MR. POLAND: No other questions.

MS. LAZAR: No other questions. Thank you, Dr. Morrison.

(Adjourning at 7:07 p.m.)

STATE OF WISCONSIN)
) ss.
COUNTY OF DANE)

I, SUSAN C. MILLEVILLE, a Court Reporter and Notary Public duly commissioned and qualified in and for the State of Wisconsin, do hereby certify that pursuant to subpoena, there came before me on the 18th day of January 2012, at 9:21 in the forenoon, at Reinhart Boerner Van Deuren, S.C., Attorneys at Law, 1000 North Water Street, the City of Milwaukee, County of Milwaukee, and State of Wisconsin, the following named person, to wit: PETER A. MORRISON, Ph.D., who was by me duly sworn to testify to the truth and nothing but the truth of his knowledge touching and concerning the matters in controversy in this cause; that he was thereupon carefully examined upon his oath and his examination reduced to typewriting with computer-aided transcription; that the deposition is a true record of the testimony given by the witness.

I further certify that I am neither attorney or counsel for, nor related to or employed by any of the parties to the action in which this deposition is taken and further that I am not a relative or employee of any attorney or counsel employed by the parties hereto or financially

interested in the action.

In witness whereof I have hereunto set my hand and affixed my notarial seal this 20th day of January 2012.

_____
Notary Public, State of Wisconsin

My commission expires
June 23, 2013

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